

Safety, Commitment, Excellence since 1890



High Point Fire Department

STANDARD of COVER 2016

Integrated Risk Management Plan (Community Risk Analysis and Standards of Cover)

City of High Point

434 S. Elm St. High Point, NC

336-883-3358





Introduction

This report serves as the Standard of Cover (SOC) document for the City of High Point Fire Department (HPFD). SOC is a term deemed by Commission on Fire Accreditation International (CFAI) as the focus of distribution and concentration of facilities, as well as apparatus and manpower to cover the needs of an area, or the Effective Response Force (ERF). This helps to ensure that the response of HPFD is appropriate and effective in providing services regarding but not limited to; fire suppression, emergency medical services, specialty response services, fire investigation and emergency management.

An in-depth analysis or total self-assessment of the HPFD was conducted to produce this report, including a department overview, a community review, community risk assessment, critical tasks analysis, agency service level objectives, and distribution and concentration performance measures. Charts and graphs highlight performance level indicators and measures, to indicate the level of service being provided by the HPFD for the City of High Point (CoHP) and its citizens and visitors.

CFAI states that the key elements of a SOC document include ‘determining apparatus and staffing patterns, measuring service delivery performance, and supporting strategic planning and policy development relative to resource procurement and allocation.’ This document serves as proof of the assessment and standards put in place to ensure an effective strategic planning management process as well as effective emergency planning and responses.

The department has created a strategic planning management process, which enables proper direction through planning efforts set forth by Fire Department administrative staff, City Council leaders, input from key department personnel as well as the community and HPFD’s customers. The strategic planning management process covers all planning aspects of the department including but not limited to data reporting, performance measurement, determining direction through the mission, vision and values and goals and objectives, determining any possible service gaps, development of the strategic plan, planning for Insurance Services Office (ISO)



High Point Fire Department- Standard of Cover 2016

based requirements, training needs, and response based studies to determine the most appropriate responses.

These aspects are all encompassed within the strategic planning management process, which occurs formally at least twice a year, but also is discussed during regular administrative staff meetings and monthly battalion staff meetings.

HPFD will continue to monitor all aspects of the standard of cover document to better serve the citizens of High Point, and to better serve the interests of the community that is listed in the Mission statement.

HPFD Mission Statement

The members of the High Point Fire Department are dedicated to provide the highest quality of professionalism, to protect the lives and property of the citizens and visitors of High Point through education, prevention and mitigation of emergencies.

Completed for:





Message from the Chief

As Fire Chief, I have the privilege to serve a great community and it is with great pride and enthusiasm that I lead the men and women of the High Point Fire Department. “The members of the High Point Fire Department are dedicated to providing the highest quality of professionalism, to protect the lives and property of the citizens and visitors of High Point through education, prevention and mitigation of emergencies”.

The greatest asset this department has is its personnel; the men and women that serve our citizens and visitors on a daily basis. In our continued quest for excellence, the last year has seen several significant changes that demonstrate our unwavering commitment in delivering services in a courteous, expedient and efficient manner. In April 2015, High Point Fire Department was awarded a PPC ISO Class 1 Rating. This distinguished accomplishment makes us 1 of only 132 departments out of more than 48,000 rated fire departments across the United States to receive this classification. In June, it was our honor to dedicate a new 5-story training tower and upgraded training center to serve the fire department for years to come.

In keeping with our mission, the High Point Fire Department’s focus and goals directly involve preserving life and property by providing services such as fire suppression, emergency medical response, hazardous materials intervention, technical rescue, water rescue , inspections, investigations, and emergency management. As you can see, on a daily basis we provide *service beyond our name*.

Saving lives and preserving property has been the main reason for the existence of the High Point Fire Department since being formally organized in 1890. October, 2015, was our 125th year of service to this great city, and we ask that you join us to celebrate this milestone in our history. We welcome you to browse our website, Facebook or Twitter sites for more information.

In closing, the fire department is constantly undergoing changes to improve our services, promote efficiency, and increase community and firefighter safety. Throughout these changes one thing that has remained constant is the High Point Fire and Rescue’s unwavering dedication and commitment to serving this great city and community. Our promise to you is that we will strive to always be prepared to respond to your needs at any time with professionalism and respect.



Contents

Introduction	I
Message from the Chief	III
Executive Summary	1
Community Served	3
Governance and Lines of Authority (Legal Basis)	3
History of the Community	3
History of the Agency	3
Financial Basis	4
Major Service Milestones	4
Area Served Description	5
Topography.....	6
Climate.....	6
Layout of Service Area	7
Population.....	7
Development within the Service Area.....	8
Major transportation features	8
Disaster Potential	9
Services Provided	10
Communications	10
Fire Suppression	10
Emergency Medical Services	11
Technical Rescue	11
Hazardous Materials / WMD	12
Training Division.....	13
Fire Prevention Division	14
Current Physical Resources Deployment	15
Service Delivery Locations	16
Apparatus and Physical Resources.....	17
Apparatus.....	17
Equipment and Gear	18



High Point Fire Department- Standard of Cover 2016

Staffing Resources	18
Administration and Support Staffing	19
Water Supply	20
Community Response Baselines	21
Community Risks	22
Overview	22
Community Expectations and Performance Goals	23
External Stakeholder Survey Results	23
CoHP Citizen/Customer Survey.....	25
Performance Expectations Goals	25
High Point Fire Department Mission/Vision/Values	26
Risk Assessment	27
Overview	27
General Overview of the HPFD Demographics	28
Physical Risk Factors	29
Political Boundaries	29
Growth Boundaries	29
Construction Opportunities	29
Infrastructure Limitations	29
Topography	30
Response Barriers Risk	30
Open Space/Interface Risk	30
Transportation Network	30
Disaster Exposure:	32
Physical Assets Protected.....	33
Service Demand (Historical Data Driven Analysis).....	36
Overview	36
Fire Demand Zone Call Volume	36
Frequency of Fire Calls by Hour of Day	37
Frequency of EMS Calls by Hour of Day	38
Risk Assessment Output	39
Probability/Consequence	39



High Point Fire Department- Standard of Cover 2016

Risk Output Summary.....	39
Critical Task Analysis.....	42
Historical Perspective and System Performance	50 52
Distribution	50 52
Concentration.....	50 52
Reliability	52 54
Comparability	53 55
Performance Objectives and Measures	53 55
Baseline / Benchmark Performance and Agency Response Times	53 55
Structure Fire Responses.....	53 55
Benchmark Performance:.....	53 55
Baseline Performance:	54 56
Technical Rescue	56 58
Benchmark Performance:.....	56 58
Baseline Performance:	56 58
Hazmat Responses	58 60
Benchmark Performance:.....	58 60
Baseline Performance:	58 60
EMS Responses	60 62
Benchmark Performance:.....	60 62
Baseline Performance:	60 62
Performance Objectives and Measures	62 64
Response Service Level Objectives (Performance Objectives and Measures)	62 64
Response Objective Methodology	62 64
Response Objective Compliance Reporting	62 64
Response Standards/Standards of Cover	63 65
System Wide Performance Objectives	63 65
Response Objectives for Turnout Time – All Calls.....	64 66
Response Objectives for Travel Time (4 personnel) – All Calls	64 66
Fire.....	64 66
EMS	65 67
Rescue.....	66 68



High Point Fire Department- Standard of Cover 2016

Hazmat.....	<u>6769</u>
Overall Evaluation	<u>6870</u>
Baseline and Current Performance Measures.....	<u>6870</u>
Historical Performance	<u>6870</u>
Identification of Community Risks	<u>6971</u>
Company Distribution and ERF Analysis	<u>6971</u>
Reliability Analysis.....	<u>7072</u>
Critical Issues and Service Gaps	<u>7173</u>
Compliance Methodology.....	<u>7274</u>
Conclusions	<u>7375</u>
List of Acronyms	<u>7476</u>
Appendix A (charts).....	<u>7577</u>
HPFD Apparatus/Equipment List	<u>7577</u>
HPFD Organizational Chart.....	<u>7779</u>
CoHP Customer Satisfaction Survey Results.....	<u>7880</u>
Frequency of Incident Types.....	<u>8183</u>
Percentage of Incident Types	<u>8587</u>
External Stakeholder Survey Results	<u>8991</u>
Fire Demand Zone Call Volume	<u>9092</u>
Appendix B (maps).....	<u>9193</u>



Executive Summary

High Point Fire Department Standard of Cover (SOC) document is written as part of the Self-Assessment process and one portion of obtaining International Fire Accreditation through the Center for Public Safety Excellence (CPSE). This is the first attempt at obtaining Accreditation by the HPFD.

According to CPSE “it is essential that agencies learn the process and skills of identifying the hazards that exist in their community, identifying the risks to which they are exposed, and the process for developing, adopting, and implementing prevention and deployment policies, including specific SOC objective statements for each significant risk.”

The SOC and risk analysis has enabled the department to take an in-depth look at the associated community risks and hazards and determine the effective response force, appropriate apparatus and SOC to help protect the CoHP and its citizens and visitors. The format of this document is designed with the Community of the CoHP being described, the hazards and risks are defined and lastly the mitigation of these risks and hazards are outlined, through the emergency response system, or in other words the HPFDs effective response force.

The result of the risk assessment and SOC is outlined in a set of clearly defined policies that describe the HPFDs integrated risk management system. This system describes the service level objectives, policy statements, and recommendations towards future emergency response based on the community risk and hazard assessment and the resulting SOC policies.

The strategic planning management process has been put in place to better understand every aspect of the HPFD, and to plan the current and future version of the Strategic Plan and SOC documents. This process allows the HPFD to seek input from both internal and external stakeholders.

Risk Assessment and levels of service for each risk type are included in this document. The risk analysis was concluded by addressing each occupancy that we inspect, and determining a score based on the SHUP analysis forms. These forms take into account size, height, use and



probability of an incident, to determine the associated risk for each occupancy. This enables the HPFD to understand the workload, real or probable, and to plan for the mitigation and response to each of these occupancies.

The HPFD is classified as suburban by CFAI standards, falling under the population of 1,000 to 2,000 per square mile actual 1,954 per square mile. However, under the direction of the Fire Chief, HPFD will follow standards of an urban department, set forth by the historic standards in response times, and the goals of the department moving forward.

Compliance moving forward will fall under the direction of the Chief of HPFD. This ensures that the department will follow rigorous standards set forth by the office of the Fire Chief. The assigned duties of accreditation fall under the direction of the Assistant Chief of Administration, acting as CFAI Peer Assessor, as well as the GIS Analyst, acting as the Accreditation Manager and CFAI Peer Assessor. Our agency having trained and certified CFAI Peer Assessors will ensure that HPFD keeps up to date with changes in standards of the accreditation process.

Completion of the SOC and Strategic Plan has helped the HPFD to determine needs for improvement. One such baseline will be decreasing the turnout time. The HPFD will work to improve all responses (fire, hazmat, tech rescue and EMS) turnout times. As part of the strategic planning management process, HPFD will be monitoring and implementing changes as needed to all areas of the Department including but not limited to budget, facilities, fleet, staffing, internal communications, standard operating guidelines and policies and personnel training.



Community Served

Governance and Lines of Authority (Legal Basis)

The State of North Carolina has legally chartered the CoHP as a local municipality. The CoHP has legally established HPFD under reference *North Carolina G.S. 160A-291 and CoHP's Code of Ordinances Title V Chapter 2 Article A*. This has enabled HPFD to operate accordingly for purposes of serving the citizens of the CoHP. The Fire Chief reports directly to the City Manager. Additional governance is issued by way of adopting the yearly budget, which includes all authorized expenses of the department. The CoHP reviews and approves programs and basic agency policies through the budget process. The High Point City Council ensures compliance with basic agency purposes and policies through the established budget objective review process and ordinances. The HPFD meets with representatives of the City Manager's office to report progress.

History of the Community

Tobacco, woodworking and textiles were the early industries during the establishment of the City of High Point in 1849. The central location in the state allowed for easy transportation of manufactured goods along the North Carolina Railroad. 1888 brought the first furniture company, with 40 new companies following its lead through the early 1900's.

Current manufacturing, private sector companies and school/government entities include a diverse list of employers; Thomas Built Buses, Ralph Lauren, High Point University, Valspar, High Point Regional Health System, Aetna, Cornerstone Healthcare, Bank of America, CoHP and Guilford County Schools.

History of the Agency

HPFD was officially organized in the year 1890 as a volunteer membership, which was the beginning of a long tradition of service for this City. The first paid firefighters for the City operated from a residence (Mrs. Fuller) property on Trade Street in 1901. It was this property where the fire horse was also stored and cared for. In 1915 the first motorized apparatus was purchased, a Studebaker hose wagon. This spurred great growth in the HPFD, which rapidly continued to expand and grow.



High Point Fire Department- Standard of Cover 2016

The HPFD is 14 fire stations in size, employing 234 personnel, with more than 40 pieces of apparatus. Service to the City is the driving force of the HPFD and the motto denotes that, “Safety, Commitment, and Excellence since 1890”.

Fiscal Year	Population	Call Volume	Firefighters
2006/2007	95,630	10,755	202
2007/2008	100,030	11,038	201
2008/2009	100,648	10,897	201
2009/2010	102,216	11,029	201
2010/2011	104,788	11,209	200
2011/2012	107,157	11,719	200
2012/2013	108,285	12,189	200
2014/2015	110,638	12,403	210

Financial Basis

High Point Fire Department (HPFD) provides an annual budget to the City Manager’s Office at CoHP. This is reviewed for inclusion in the city wide annual budget on an annual basis. This budget reflects the needs of HPFD to better serve the CoHP, and as the City grows geographically, HPFD determines the needs to keep the services viable. CoHP publishes a complete set of financial statements and reports, in accordance with NC general statutes, and reporting standards set by Generally Accepted Accounting Principles (GAAP). CoHP has achieved the Certificate of Achievement for Excellence in Financial Reporting by Government Finance Officers Association (GFOA). This has ensured that HPFD is under appropriate guidance by the CoHP with clear financial standards that are verified by an outside agency. We have provided the certificate from 2014 the last year for which the GFOA has completed reports. CoHP is currently under review for 2015 with results due mid-Summer of 2016.

Major Service Milestones

High Point Fire Department has recently acquired several new apparatus as well as new fire stations and facilities. These additional apparatus have served to replace old and outdated apparatus, as well as help to fill in new service areas, providing better levels of service to the CoHP and its visitors. The new stations have served to fill in service gaps, and enhance the



High Point Fire Department- Standard of Cover 2016

response times to the customers of the HPFD. A new training tower located at the training facility was added in June 2015, creating a state of the art training site for the employees of the HPFD. In 2012 a fleet maintenance and logistics facility was added to enable maintenance and equipment procurements for the HPFD. Also in 2015 the HPFD was awarded an Insurance Services Organization (ISO) Class I rating. This was a major accomplishment and testament to the forward direction of the department. Below is a list of the service milestones achieved for the last six years.

2009 Engine 7 and 10

2009 Station 3 (replacement)

2010 Station 4 (replacement)

2012 Engine 11 and Ladder 12

2012 Fleet Maintenance Facility and Logistics Facility Replacement

2014 Engines 9 and 1

2015 Training Tower (replacement)

2015 ISO Class 1 rating

2016 Live Burn Smoke House

2016 Safety and Survival/Mayday Training Props

2016 Ladder 7 and 2 new engines

Area Served Description

The CoHP is located in the Piedmont region of North Carolina, and HPFD serves 71 square miles. Three major cities including Greensboro, Winston Salem and High Point, make up what is referred to as the Triad. High Point lies 1 hour West of Raleigh and 1.5 hours Northeast of Charlotte, NC. The CoHP lies geographically within four Counties (Guilford, Davidson, Randolph and Forsyth).

Known as the furniture capital of the world, High Point is home to the semi-annual International Home Furnishings Market, bringing 160,000 visitors from 100+ Countries in the Spring and Fall. The City's slogan, North Carolina's International City, is derived from the diverse visitors to the



High Point Fire Department- Standard of Cover 2016

Market. High Point has a major university, High Point University, a private institution founded in 1924 (ranked by US News as the #1 Regional South College for 3 years).

Topography

The CoHP is the only City within North Carolina that lies within four different Counties (Guilford, Davidson, Randolph and Forsyth). It lies within two major river basins (Cape Fear and Pee-Dee) and stands at 1,000 feet at the highest elevation. The name High Point was derived from the highest point between the cities of Charlotte and Goldsboro, NC along the old North Carolina Railroad. This railroad intersected Old Plank Road (now Main Street) which ran between Winston-Salem and Fayetteville, NC. There are two major bodies of water, Oak Hollow Lake and High Point City Lake, both providing drinking water for the City.





Appalachian wedge, trapped cold air from the NC Mountain region with warm moist air aloft, creates a phenomenon of frequent icy conditions in the winter seasons.

Hurricanes may impact the region with enhanced rainfall and windy conditions, often resulting in downed trees and impacted power lines. Tornado threats are not unheard of given the relatively flat terrain and shifting weather patterns resulting from close proximity to continental, mountain and coastal weather pattern influences mixing.

Layout of Service Area

The CoHP is 80% developed and includes limited amounts of rural area surrounding the City. These areas are all subjected to being annexed in the future as development arises, with agreements in place with surrounding Cities that outline annexation potential between municipalities. High Point's major employers include a mix of business, local government, healthcare and educational institutions.

Business	Employees
Ralph Lauren	2853
Thomas Buses	1406
Bank of America	2000
Hospital	1702
City of High Point	1359
High Point University	1176
Guilford County Schools	1684
Cornerstone Healthcare	1224
APAC Customer Services	1100

Population

With a population of 110,638 in 2015, High Point is the 8th largest City in the State of North Carolina. The Piedmont Triad region has a population in excess of 1.6 million people.

International and US visitors bringing 160,000 visitors attending the High Point Market, once in the Spring and once in the Fall. High Point University also increases the population by 6,000 students seasonally. The total population as well as concentration both plays a major role in the assessment of the community by HPFD and the placement of apparatus and personnel resources.



Station	Population	Population
1	9219	8.4%
2	3805	3.5%
3	7368	6.7%
4	9914	9.0%
5	8711	7.9%
6	5489	5.0%
7	9926	9.0%
8	5371	4.9%
9	10011	9.1%
10	13168	12.0%
11	8399	7.6%
12	4943	4.5%
13	9008	8.2%
26	4511	4.1%
Total	109843	109843

Source: 2010 US Census Data

Development within the Service Area

The CoHP is a mixture of urban and suburban areas. There is a defined downtown region, comprised mostly of furniture market showrooms and businesses. Sprawling businesses keep intact along the Main Street corridor to the North and South of downtown. Surrounding the urban area is a vast area of residential and suburban area totaling nearly 70,000 residential homes, mixed with various types of businesses. To the South and West of downtown is an industrial area with mixed manufacturing.

Major transportation features

The CoHP has a major rail service that includes both freight lines and an Amtrak line. Railroad responses are in place to help determine the best coverage based on the placement of fire station and apparatus. CoHP also has several major highways that intersect within the City and surrounding areas. These include I-73, I-74, I-40, I-85 and Business 85. These highways are all considered major interstates and are utilized by commercial and personal traffic. The location of the Piedmont Triad places High Point at a central location for travel on both an East/West and North/South travel corridor for the Country. Highway responses are in place to determine the best case response based on types of calls as well as direction of travel.



Disaster Potential

The CoHP is located in a region that may receive tornadoes, hurricanes, wind events, ice storms and large amounts of rainfall producing flooding. April 2010 included a category III tornado that caused extensive wind damage to homes in the northwest portion of the CoHP. Hurricanes bring increased amounts of wind and rain damage with power outages. Annual ice storms occur in the winter and have the potential to cause power outages. Increased rainfall amounts occurring seasonally result in flooding of streets and neighborhoods.

Railways, highways and oil and gas pipelines all intersect the CoHP and present unique disaster potential. Specific response protocols are in place to deal with these potential incidents.

Chemical manufacturing plants are located throughout the CoHP and present the possibility of chemical release.

Semi-annually the High Point Furniture Market doubles the population of the CoHP and brings International exposure to the City in excess of 160,000 visitors annually. The preparation and increased response taxes the CoHP, but the furniture market is a vital component of the local industry and tax base. The following list includes the potential of disaster types of responses that may occur within the CoHP.

- Tornadoes
- Flooding
- Wind
- Hurricanes
- Natural Gas Pipeline
- Colonial Oil Pipeline
- Ice Storms
- Railway Response
- Highway Response
- Chemical Manufacturing



Services Provided

HPFD is a full service fire and rescue department, capable of responding to any and all incidents within the CoHP. HPFD has a fleet of maintained and updated apparatus that are strategically placed throughout CoHP, as well as a competent, highly trained staff of employees. These programs and equipment and personnel are placed according to budget planning based on community risk and planning with the CoHP City Manager's Office.

Communications

The CoHP Communications Department provides dispatching services for the HPFD and operate efficiently and effectively based on the needs of the department and serving the citizens and visitors of High Point. The 911 Center operates on a procedures based approach. However this has created a high standard of performance that easily meets NFPA mandates and national standards. Telecommunicators are well trained whereas all High Point 911 personnel have completed new employee basic telecommunicator training. High Point 911 personnel also complete mandated continuing education training. This ensures that adequate, timely and reliable communications takes places to meet the needs of High Point Fire Department (HPFD).

HPFD utilizes an 800 MHz radio system that is North Carolina Voice Interoperability Plan for Emergency Responders (VIPER) capable to allow for interoperable communications. HPFD apparatus are equipped with one mobile radio and a complement of portable radios to provide one radio for each company member. Administrative personnel are provided with an assigned portable radio. Spare radios are located at HPFD Headquarters Station and at High Point 911. Each HPFD station is also provided with a base set radio. Dispatch services are provided by High Point 911.

Fire Suppression

Currently, the CoHP is protected by 14 fire stations, housing 14 Engine Companies, 4 Ladder Companies, 2 Battalion Chiefs and 1 Rescue. Response units are staffed by 3 rotating shifts consisting of a total of 210 personnel. HPFD has an established history of providing an efficient and adequate fire suppression program. Stations and equipment are located to provide the ability to meet or exceed response time goals. All apparatus were acquired in compliance with NFPA



1901 when purchased and are maintained by the HPFD Fleet Maintenance Division utilizing a consistent maintenance schedule. The staffing of HPFD apparatus adequately allows the HPFD to meet response time goals. The HPFD General Orders, Safety Manual, and the use of the NIMS-compliant Incident Command System are utilized to provide the highest level of service possible. The department's Firehouse Record Management System (RMS) is appropriate and allows for documentation of incidents and analysis of the suppression program including loss data and is evaluated at least quarterly through the strategic planning management process.

Emergency Medical Services

HPFD operates as part of the Emergency Medical Services (EMS) program that provides EMS services at the Emergency Medical Technician – Basic level (State of North Carolina includes the use of defibrillators and administration of approved medicines). The 14 engine companies and 1 rescue company respond to medical calls of stipulated severities within their territories. HPFD ladder companies may also respond to medical calls if extraordinary conditions dictate. Local County EMS providers provide for the transport of patients to medical facilities. HPFD operations personnel are required to acquire and maintain certifications as Emergency Medical Technicians (EMT) at the basic level.

HPFD meets its staffing, response times and deployment level objectives based on the general orders that drive the operations division. These same orders dictate the appropriate use of materials, equipment and personnel to respond to medical incidents. The department utilizes appropriate Guilford County EMS HIPAA protocols as a basic level responder. The Department's RMS is appropriate and allows for analysis and documentation of incidents for the EMS program, which is evaluated at least quarterly.

Technical Rescue

HPFD provides NFPA compliant technical rescue and water rescue/dive teams that have been the responding assets for technical rescue and water rescue/recovery incidents involving high-angle, confined space, trench, structural collapse, swift/surface water, and dive rescue/recovery incidents within the response area covered by the HPFD. The technical rescue team has been provided with appropriate and adequate equipment for response to technical rescue incidents in



conformance with the North Carolina Office of State Fire Marshal's (OSFM) technical rescuer curriculum. The technical rescue team, water rescue/dive team, and vehicle extrication asset operating procedures are stipulated in HPFD general order 700 and an appraisal is conducted at least annually through the strategic planning management process. The HPFD's technical rescue team is a technician-level team that is trained to respond to the diverse array of technical rescue incidents that may occur within the HPFD's jurisdiction. HPFD will continue to be the lead agency in the response to technical rescue and water rescue/dive rescue and recovery incidents within the jurisdiction.

Hazardous Materials / WMD

HPFD hazardous materials response team has historically been the responding agency for spills, releases, or accidents involving hazardous materials at fixed site and transportation incidents. In addition, non-hazmat team personnel are trained to and respond at the operations level. The HPFD's Hazmat Team is a Technician-and Specialist-level team that mitigate hazardous materials incidents through the use of offensive and defensive actions. Operations level personnel may perform defensive actions and assist with decontamination efforts. The HPFD will continue to be the lead agency, working with all departments of the CoHP, in the response to and mitigation of hazmat incidents within the jurisdiction covered by HPFD.

The CoHP all-hazards preparedness program is led by the CoHP Office of Emergency Management (OEM), which lies within the HPFD and is National Incident Management System (NIMS) compliant. The High Point OEM is responsible for the maintenance and revision of the CoHP Emergency Operations Plan (EOP), which serves to guide the management of emergencies and establishes the structure of response efforts in the field and in the City Coordination Center (CCC). The CoHP's preparedness program addresses both natural and man-made hazards. The hazardous materials and WMD programs are assessed at least annually through the strategic planning management process. Also the Department's RMS is appropriate and allows for documentation of incidents and analysis.

The High Point Fire Department Hazmat Team has been provided with appropriate and adequate equipment, supplies and materials for response to and mitigation of hazardous materials incidents in conformance with the North Carolina Office of State Fire Marshal's Hazardous



Materials Technician Curriculum; and other state and national standards. The equipment listed in HPFD Hazmat Apparatus Equipment Lists for each hazmat team apparatus shall be considered the minimum complement of equipment.

The High Point Fire Department Hazmat Program has been directed by HPFD General Order 700, which addresses operating procedures, response protocols, and overall management of the Hazmat Program. This General Order has been adjusted over time and is improved on over time to meet the needs of the department.

Training Division

The training division utilizes an ISO compliant training facility, including a 5 story training tower and an educational center. Fire apparatus are extracted from available front-line stations for training purposes. Specialty team training (technical rescue, hazmat, EMS) are conducted onsite with specific fixed-site facilities, or through Guilford Technical Community College Emergency Responders Training Center (GTCC ERTC).

The current process used to determine the content of the training program is determined by the Battalion Chief of training. This process is based on evaluation of previous performance, to measure the effectiveness of the training needs of High Point Fire Department (HPFD), based on national standards. The HPFD training calendar, resulting from this process, impacts all divisions and operations of HPFD and provides a tool for supervisors to plan their activities. The training schedule and plan includes programs and classes that provide information and training for the entire agency.

The training division conducts evaluations of performance based measures through Special Training Groups (STG), Special Operation Groups (SOG), and HPFD General Order 500, open source learning platform references (Moodle), and City of High Point Learning Management System (LMS). Through the use of data reporting, HPFD tracks Certification and License expirations.



Materials are evaluated on an as-needed basis or before promotional processes begin. This is a process that is continually being revised, and the training division currently plans to evaluate on a more frequent basis. Materials are evaluated by monitoring industry standards and attending state meetings that provide current training standards.

Fire Prevention Division

HPFD conducts fire investigations, code enforcement and fire life safety education programs to eliminate the threat of fire for the CoHP through the community risk reduction program. These programs are mandated by NC State Fire Code, relevant NFPA standards, Insurance Services Office (ISO), as well as HPFD general orders. The CoHP adopted the Fire Code in 1958, with the adoption being updated throughout various years. It was stated that future revisions are automatically adopted by reference. Adequate staff and trained personnel are qualified to provide HPFD with qualified fire investigations, public education and relevant fire prevention. These programs are reviewed at least annually through the strategic planning management process for relevant changes and updates as needed. The RMS is available for the Fire Prevention Division to record and report relevant information and data for analysis of the program and its effectiveness.

Construction plan reviews, code enforcement, and fire and life safety/education programs target specific risk reduction strategies for CoHP. HPFD Fire Prevention Division Public Education Program is led by our fire prevention education officer. The program provides for participation by individuals, businesses and the community in targeted fire and life safety education programs. These programs can be offered as design by request, to satisfy the needs of a specific target audience, hazard, or demographic.

The HPFD has in place a program to investigate all fires, led by the Fire Marshal. Every fire is investigated with trained staff that provides adequate staffing and expertise to determine origin and cause by the company officer or the incident commander. When the origin and cause cannot be determined, an investigator assigned to the fire prevention division will conduct the investigation. These investigators are on call at all times to assist operational personnel. Additional resources are available to assist the division during complex investigations including



State Bureau of Investigations (SBI) and Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF). The community risk reduction program is assessed at least annually through the strategic planning management process.

By utilizing National Fire Incident Reporting System (NFIRS), HPFD fire and life safety education monthly report, CoHP performance measures report, University of North Carolina (UNC) School of Government benchmarking project and Geographic Information Systems (GIS) the division has analyzed data and trends to deliver targeted public education to the appropriate audience. This allowed the program to be responsive as trends are identified to deliver on time, on target, appropriate education. The community risk reduction program encompassed multiple projects such as references; 2015 natural gas incident report and outreach program, 2016 Red Cross HPFD partnership for community smoke alarm canvas, juvenile fire setters program, and 2015 furniture market Pink Cares truck outreach.

Current Physical Resources Deployment

HPFD currently provides emergency and non-emergency services from (14) locations within the jurisdiction. HPFD facilities are strategically located based on the intended purposes, the direction of HPFD and CoHP, and for the intended needs of the facilities. They are designed according to national standards, and provide the necessary space and layout needed, dictated by the daily functions of HPFD. Regular maintenance and frequent inspections assure that the facilities are kept to a high standard set by the department based on NFPA and State standards. Facilities provide adequate space and function, for all HPFD divisions. All divisions of the department function out of adequate spaces provided. All fire facilities provide adequate placement as well as adequate equipment supplied at the facilities.

Department apparatus are well maintained and updated through the HPFD preventative maintenance schedule, performed by the fleet services and logistics division. Apparatus are kept up-to-date with new units through the CoHP approved 15 year apparatus replacement plan. HPFD fleet maintenance employees are all Emergency Vehicle Technician (EVT) trained.



High Point Fire Department- Standard of Cover 2016

The department has utilized these facilities and apparatus and gear to ensure that proper response times are met, and the department has maintained service levels, staffing, response times and NFPA deployment objectives. This is evident through the current Class 1 ISO Rating (conducted in 2014, awarded in 2015).

Service Delivery Locations

HPFD has 14 total facilities that serve as emergency and non-emergency fire response stations within the jurisdiction. These facilities are equipped with all the necessary gear and apparatus essential to perform the tasks of HPFD. Operations Division facilities provide adequate space and function. These facilities also house all HPFD trained response personnel for 24 hour shifts. Other Divisions (Inspections & Logistics) are currently undergoing a space needs study to determine adequate workspace needs and to include a customer friendly environment. HPFD operations facilities locations are dictated by measured response needs, based on response expectations and parameters set by National Fire Protection Agency (NFPA) 1710 response standards.

STATION 1	508 N. CENTENNIAL ST.
STATION 2 (Administration Headquarters)	434 S. ELM ST.
STATION 3	1309 CHESTNUT DR.
STATION 4	930 OLD WINSTON RD
STATION 5	3828 JOHNSON ST.
STATION 6	110 SPRINGFIELD RD.
STATION 7	1116 GORDON ST.
STATION 8	208 PROSPECT ST.
STATION 9	2707 TRIANGLE LAKE RD.
STATION 10	2419 WHITES MILL RD.
STATION 11	3604 MORRIS FARM RD.
STATION 12	4538 BARROW RD.
STATION 13	2414 AMBASSADOR CT.
STATION 26	2127 SANDY RIDGE RD.
TRAINING CENTER	1035 W. WARD ST.
MAINT./LOGISTICS FACILITIES	213 FISHER AVE.



HPFD facilities are adequate based on the intended purposes, the direction of HPFD and CoHP, and for the intended needs of the facilities. They are designed according to national standards, and provide the necessary space and layout needed, dictated by the daily functions of HPFD. Regular maintenance and frequent inspections assure that the facilities are kept to a high standard set by the HPFD.

Apparatus and Physical Resources

HPFD fleet maintenance division designs and purchases apparatus and associated resources, which provides adequate support for the operations division in obtaining their response goals. The apparatus and resources help the operations division to meet the goals and objectives of the department, providing the best possible service to the people and visitors of the CoHP. This allocation also serves to adhere to the department's mission, vision and goals and objectives. Types of apparatus utilized at HPFD are appropriate based on the need of the type of service they provide. Operations apparatus include front line, specialized and reserve units. Administrative vehicles are also provided and include several spare units.

HPFD identifies and distributes safety equipment to all applicable personnel that is adequate and meets the goals and objectives of the department. A respiratory protective equipment log book is provided to applicable testing and repair personnel, as stated in the HPFD Respiratory Protection Program, General Order 900. Safety equipment provided to applicable personnel for special operations activities is stated in High Point Fire Department General Order 700. Safety equipment for non-emergency response activities is delineated in the HPFD Personal Protective Equipment Assessment.

Apparatus

HPFD has in place a set of plans to enable the acquisition of physical apparatus resources as well as the maintenance and upkeep of current physical apparatus resources. A vehicle replacement plan is in place to address new apparatus and qualified EVT fire staff is available to ensure preventative maintenance of apparatus. HPFD standard of cover document ensures that we have ample fire stations so that response times are consistently meeting agency goals and objectives.



A PPC ISO class 1 rating indicates our commitment to maintenance and upkeep of physical resources (see Appendix A for list of apparatus), as well as the correct placement of physical resources.

Equipment and Gear

The equipment provided to accomplish the stated level of fire suppression response is delineated in the equipment list for each HPFD apparatus. HPFD provides equipment consistent with the achievement of Insurance Service Office (ISO) public protection classification system class 1 rating. HPFD fleet maintenance division and staff perform repair, preventative maintenance, and inspection of all department equipment and apparatus. The maintenance division utilizes a fire department maintenance facility which provides space for maintenance staff. This in house division enables the HPFD to provide repair and maintenance 24/7 with on-call staffing. This ensures that the apparatus service and reliability meets the needs of the City and the goals and objectives of HPFD.

Staffing Resources

The CoHP Personnel Resolution outlines all applicable hiring, retention and promotion of personnel. These processes follow all mandates set forth by local, state and federal laws. This ensures that the HPFD hiring, retention and promotion processes are suitable to provide the appropriate services to the CoHP. The City Manager assigns the duties and responsibilities for all staffing within Human Resources (HR) Department. This ensures adequate staffing for all HR departmental functions and duties. HPFD staff is also trained in all applicable national mandated health and safety programs.



High Point Fire Department- Standard of Cover 2016

The daily and total staffing for each station is listed in the chart below. The total daily minimum staffing is 58 personnel. If this is not reached a callback procedure is in place to hire overtime personnel.

Location	Daily	Total Staff
Station 1	4	12
Station 2	6	18
Station 3	3	9
Station 4	6	18
Station 5	3	9
Station 6	3	9
Station 7	6	18
Station 8	3	9
Station 9	3	9
Station 10	3	9
Station 11	3	9
Station 12	6	18
Station 13	6	18
Station 26	3	9

Staffing of Companies FY 2014-15		
	Companies	Minimum
Engines/Pumpers	14	3
Aerial trucks	4	3
Rescue	1	2
Battalion Chiefs	2	1

Administration and Support Staffing

HPFD administration is supervised by the Fire Chief who reports directly to the City Manager. It is the duty of administrative staff to implement policies that are created at the Fire Chief level. Administrative staff provides technical and administrative support to all members of HPFD through administrative support, financial management, human resource management, facilities management, fleet services maintenance, training and education, code enforcement and investigation, and fire and rescue operations management.



The department has migrated to Firehouse Records Management System (RMS) in 2014 with an annual vendor maintenance support contract. This has helped to ensure appropriate record keeping and data reporting. The High Point 911 center has handled all of HPFD dispatch services in an efficient manner and sends incident call data automatically to the RMS. General computer and software has been supplied by the City IT Services Department, and has provided for up-to-date and current PC and software needs. All fire stations have access to the internet as well as the City and Agency intranet pages. The department has 2 assigned IT staff personnel, with the City IT staff that serves as backup and support for the department (see Appendix A for HPFD Organizational Chart).

Water Supply

The CoHP public services department manages and supplies the department with sufficient water resources including an ample supply of water and hydrants. The HPFD utilizes a fixed water supply for firefighting purposes that provides water in sufficient volume and at sufficient pressure to control and extinguish fires. Water flow and total water supply requirements are determined according to the occupancy type and other relevant factors relating to structures, as compliant with PPC Class 1 ISO rating. CoHP has a robust hydrant system that covers 99% of the CoHP. Such information is available to HPFD personnel for fire risk evaluation and pre-fire planning through the RMS.

Reviewing site plans and constructions plans for new construction, HPFD receives plans through the CoHP Accela computer program. Water flow requirements are then determined according to the occupancy type and other relevant factors. The North Carolina Fire Code is then consulted to determine needed fire flow. Reductions in needed fire flow in structures with approved sprinkler systems are allowed as per the North Carolina Fire Code. The HPFD has maintained water supply and hydrant maps in the High Point Fire Department GIS. The High Point Public Services Department has also maintained hard copy water supply and hydrant maps (High Point Public Services Water Supply and Hydrant Maps). Hard copy maps have also been printed from the High Point Fire Department GIS



CoHP water distribution system has provided water at sufficient volumes and pressures in compliance with the ISO Public Protection Classification Rating System, awarding the CoHP water supply system a score of 38.73 out of 40 possible points. This was a major factor in HPFD achieving a PPC Class 1 ISO rating. Hydrant placement and total numbers have also been sufficient according to compliance with the ISO Public Protection Classification Rating System. HPFD operational procedures regarding the utilization of available water supply are delineated in High Point Fire Department General Order 600.

Community Response Baselines

Performance response times are based on high standards set forth by NFPA, and measured on a semi-annual basis by HPFD for in-house reporting as well as for ISO standards reporting. These response times reflect an Urban classification according to CFAI standards on population density and service area layout. HPFD covers an area of 57 square miles of city limits and a total response area of 71 square miles. CoHP has a population of 110,638 equaling a density of 1940 people per square mile. The 14 square miles of contract area have a population of 17,646 and a population density of 820.

Urban	1st Unit	2nd Unit	Balance 1st alarm	Performance
Benchmark	4 min.	8 min.	8 min.	90%
Baseline	5 min. / 12 sec.	10 min. / 24sec.	10 min. / 24sec.	90%

Call Processing

Fractal call processing time baseline has been 0:54 or less 90% of the time.

Turnout time:

Fractal turnout time baseline has been 1:33 seconds or less 90% of the time

First arriving Unit – travel time

Fractal response time travel time baseline for emergency/potentially life threatening calls has been 4:55 or less 90% of the time

First Due (totaling 4 personnel) at a structure fire

Fractal 1st arriving baseline time has been 6:08 or less 90% of the time.

Full 1st alarm assignment (15 personnel) at a structure fire:

Fractal 1st alarm assignment time baseline has been 9:09 or less 90% of the time.



First HPFD unit at a rescue incident:

Fractal travel time baseline has been 4:51 or less for the arrival of the 1st HPFD unit 90% of the time.

First HPFD unit at a hazmat incident:

Fractal travel time baseline has been 5:21 or less for the arrival of the 1st HPFD unit 90% of the time.

Community Risks

Overview

HPFD has utilized the strategic planning management process to help determine internal and external stakeholders for the department. These stakeholders drive research, help to determine direction of HPFD and provide valuable input to the planning process. This enables HPFD to achieve the most with its given resources, to be sure that members of the department and HPFD customers are satisfied with the direction and performance of the HPFD.

Internal Stakeholders

- HPFD Administration
- HPFD Staff
- CoHP Elected Officials

External Stakeholders

- Residents of CoHP
- Business Owners/ Community Leaders of CoHP

The HPFD strategic planning management process has been created to develop plans, measure effectiveness and provide a strategic planning process for all areas of the department. This process of meetings and general planning has helped to serve the Department in a manner that is consistent between all Divisions.

HPFD internal stakeholders meet, at a minimum, on a quarterly basis to specifically discuss items related to the strategic planning management process. HPFD administrative staff meets on



a weekly basis to discuss operational goals, often encompassing any number of relative directives outlined in the strategic planning management process within the HPFD Strategic Plan, including but not limited to the department's mission, vision, goals and objectives, size and structure.

Community Expectations and Performance Goals

The HPFD held a meeting on November 2nd 2015, inviting external stakeholders that included residents, business owners and managers, community leaders, and the general public. Thirty invitations were sent with a total of 12 people attending. HPFD described the accreditation process, the 3 documents comprising the process and how the external stakeholders can provide input into the strategic plan. The external stakeholders appeared to be very interested in the process and in support of the HPFD moving forward.

Social media has been a recent focus of HPFD to help convey all of the services that are present for public safety. The external stakeholder meeting was a positive experience, and HPFD will work in the future on requesting more feedback from the community through various formats.

A community survey was sent to all invitees for feedback through email and an online survey format. The following questions were asked:

- HPFD services were needed
- HPFD staff professionalism
- HPFD response times
- HPFD staff knowledge
- HPFD helpfulness
- Overall rating of HPFD

External Stakeholder Survey Results

The following results are derived from the survey asked of the external stakeholders, for input to the strategic planning management process. These will enable HPFD to better focus on areas of need as well as continue to provide a professional, well trained public safety service to the CoHP. (see Appendix A for external stakeholders survey results) These answers and input are taken into account within the HPFD strategic planning management process. This enables the



HPFD to allow for customer input and provide direction moving forward that is focused on community driven decisions and planning.

The following excerpt is from a response in the comments section derived from the customer survey, from an external stakeholder. This helps to paint a picture of the department that is viewed from the community. This follows in line with a letter that was sent to the Chief of HPFD, from a local business, entered as reference for the accreditation process.

“Fire/Alarm Response: The HPFD responds to all fire alarm activations at our facility in a timely manner, with usually two or more engines on the initial response. The on-duty battalion chief also responds and assumes command from our Safety/Security office where fire notification information is obtained. EMS Response: HPFD responds with EMS to any medical calls on our property that are located outside of our main facility. With 3 firefighters/EMT responding, HPFD provides the necessary assistance for EMS services to complete their duties. Inspection Services: HPFD Inspectors are always available for consultation and inspection when requested. In addition to yearly inspections, the Fire Inspectors routinely come to our facility to assist our staff in life safety code compliance, access and security procedures, and all safety related functions within the purview of their department. Extraneous Services: HPFD regularly volunteers to assist our organization during inclement weather events, community service events, emergency management responses and training, and at any other time we are providing a service to our community and are in need of assistance. Such events include participating in our disaster drills, community health screening events, serving as judges for our Annual Chili Cook-Off and a multitude of other initiatives that benefit our community.”



Customer Expectations of HPFD

Service to CoHP
Effective and appropriate use of funding
Community service
Fast response times
Knowledgeable staff
Well trained staff
Appropriate gear
Appropriate apparatus
Customer service oriented
Prompt service
Professional service
Courteous service
Knowledgeable personnel
Proactive personnel
Accessible staff
Respectful staff
Calm in high stress situations
Specific answers to fire and code related questions
Cooperation and assistance

CoHP Citizen/Customer Survey

Every year the City of High Point performs a citizen survey of the city, with an in-depth study for specific departments. HPFD is consistently reported to achieve the highest ratings by its customers and citizens of the CoHP. These results are presented (*see Appendix A CoHP Customer Satisfaction Survey Results*) for the year 2014; this is showing that HPFD consistently rates in the top of High Point City departments. Continued emphasis will be placed on the continued exemplary service for its customers, the citizens and visitors of High Point. *Survey conducted for City of High Point, NC by ETC Institute of Olathe, Kansas.*

Performance Expectations Goals

HPFD developed a Strategic Plan 2016 that encompasses the direction and vision of the department through a strategic planning management process. The Strategic Plan includes the Mission and Vision of the department, as well as highlights the goals and objectives of HPFD and provides an avenue for community input and discussion. The HPFD strategic plan also



highlights the Strengths, Weaknesses, Opportunities and Potential Threats (SWOT) to the department. This information is used to help improve the department in all aspects to ensure that saving lives and preserving property is maintained and improved upon. These goals and objectives, the department mission, vision and values are all assessed periodically through the strategic planning management process. The City Manager has reviewed and accepted the submittal of the strategic plan.

High Point Fire Department Mission/Vision/Values

City of High Point publishes a mission statement through the City Manager's office. This provides direction and guidance for all departments, to ensure that the goals and objectives of the City of High Point are being met. HPFD issued a mission statement that follows the general direction of the City of High Point mission. HPFD is divided into 5 divisions which include administration, operations, fire prevention, training, and technical services. Within these divisions, HPFD is able to accomplish the goals and objectives of the department. This ensures that we are completing the mission of the department.

Mission:

The members of the High Point Fire Department are dedicated to providing the highest quality of professionalism, to protect the lives and property of the citizens and visitors of High Point through education, prevention and mitigation of emergencies.

Vision:

To become an internationally accredited organization, dedicated to continuous improvement in all services provided.

Values:

Service

Commitment

Excellence

Integrity

Honor

Motto:



Safety, Commitment, Excellence since 1890

Risk Assessment

Overview

HPFD has utilized the Size, Height, Use, Probability (SHUP) criteria classification form to determine a list of risks and hazards associated with the CoHP. Risk is defined by NFPA 1500 as “a measure of the probability and severity of adverse effects.” Management of these risks is associated with the identification, planning and mitigation of risks. In the past the department has relied on pre-entry inspections and surveys, and determined the target hazards at the company level. HPFD will continue to utilize a more formalized and standard process to compare all occupancies with the same type of data and information through the strategic planning management process. The SHUP form is the first pass at this improved process to determine risk within CoHP. HPFD will continue to evaluate, monitor and collect data for improvement in our pre-entry process and information collection. This will enable the department to compile a more robust classification by utilizing a larger dataset, which will be a more precise and in depth target hazard classification.

Risk Assessment Methodology

HPFD conducted a risk assessment by acquiring occupancy data from RMS and Geographic Information System (GIS) datasets to determine a score based on the SHUP criteria. This has associated each occupancy that requires an inspection in the CoHP with a score.

There was a low of rank 3 and a high of rank 11. These numbers will likely change in the future as more data becomes available as pre-entries are completed for each building in the CoHP. This will enable HPFD to use a more robust classification scheme to determine risk.

SHUP Scores	
High Risk	8 to 11
Medium Risk	4 to 7
Low Risk	0 to 3



The table below highlights the total numbers of Low, Medium and High risk scores within the CoHP. Assessing these risks is an important aspect of planning for HPFD to help to justify risk assessment planning, pre-entry inspections as well as SOC deployments.

SHUP Analysis	Total buildings
Low	169
Medium	4038
High	1322

The table below highlights the total number of risks by score and by station territory. It is known that the stations in the North end of town have more residential and less manufacturing and business occupancies, so the risks are lower. The downtown portion and South end of town have the bulk of manufacturing and high rise occupancies, so the risks in these station territories is higher.

Risk by Station (SHUP form)			
Station	Low	Med	High
1	6	551	103
2	2	547	61
3	6	208	32
4	9	396	129
5	7	29	18
6	12	471	149
7	12	163	64
8	22	546	241
9	9	272	128
10	18	396	109
11	24	160	104
12	7	56	3
13	17	215	166
26	18	28	15

General Overview of the HPFD Demographics

CoHP has 100 residential apartment complexes, 32 condominiums, 55 townhomes, 24 business parks, 61 housing authority complexes, 8 mobile home parks, 210 subdivisions, and 8 industrial parks. These planning areas located within CoHP GIS datasets makes it easier for HPFD to better



understand the layout of the service area and better plan for response types and placement of apparatus, facilities and manpower. One hospital with 351 beds and serves 120,000 patients annually.

HPFD performs pre-entries on all non-residential occupancies, and adheres to State and CoHP codes. The new construction is modern and when remodeling or retrofit has taken place code enforcement ensures that changes are made according to current code or that buildings are brought into code with fire suppression systems where applicable.

Physical Risk Factors

Political Boundaries

CoHP borders the cities of Greensboro, Archdale and Trinity and falls within close proximity of Thomasville, Kernersville and Winston Salem. CoHP has City Limits residing within 4 Counties including Guilford, Randolph, Davidson and Forsyth. This makes it necessary to have close working relationships with surrounding jurisdictions to ensure that proper agreements and mutual aid dictate the required response levels. CoHP has in place agreements with Greensboro, Kernersville and Winston Salem with regards to future annexation areas.

Growth Boundaries

Davidson County, to the West, represents the greatest potential for residential growth for the CoHP. Portions of Guilford County to the North also present ample opportunities for residential growth. Industrial and Commercial growth is planned to occur in the Northwest I-74/66 corridor and the North along the I-40/Sandy Ridge corridor. Future facilities and apparatus placement will be dictated by these growth areas, to ensure that proper response can occur in a timely manner.

Construction Opportunities

CoHP is built-out to the South with Industrial and Factory buildings, but revitalization may take shape in the future as development warrants an upgrade in buildings and infrastructure. Building is limited to the East with Randleman Lake watershed buffer rules.

Infrastructure Limitations

Infrastructure within CoHP is of an utmost concern for local leaders. They are willing to work with developers to ensure that proper infrastructure is in place and efficient. Polo Ralph Lauren



is currently expanding to the West along I-74. CoHP has worked closely with the business to ensure that water and sewer are in place. DH Griffin, a nationally known demolition and builder is creating a business park to the North along I-40.

Topography

There are no known topography limitations or risks associated with the CoHP. The terrain is relatively flat with gentle slopes, resulting in no apparent risks associated with responses. Below Oak Hollow dam the risk of infrequent flooding is a known risk, but it is a rare event and is known to HPFD.

Two lakes fall within CoHP and HPFD response territory. Oak Hollow Lake is centrally located within CoHP city limits. The Lake does present a response barrier however Stations 5 and 10 are strategically placed to keep response times low. High Point City Lake lies on the Eastern edge of the CoHP.

Response Barriers Risk

Two lakes exist within the CoHP, with one being located centrally in the city, Oak Hollow Lake. The lake presents a slight risk with the location making response times slightly longer. Highway response limitations occur with access points along the highway corridors often being spaced far enough to hinder access, or increase turnaround times.

Open Space/Interface Risk

There are no large vast open spaces within CoHP. Trails and greenways are the only open space that presents linear response limitations. Known access sites and a trail way marking system are in place to enable efficient response times. The marking system is linear in nature, added to the computer aided dispatch (CAD) system, as address points so that an incident shows up on the apparatus mobile computer terminal (MCT) screens.

Transportation Network

Roads

CoHP roadways are modern and in good repair. The transportation department is utilizing modern techniques for lighting intersections, and making repairs to roadways as needed. There are no known response obstacles pertaining to CoHP roadways. In areas where roadway incidents appear to be higher than normal, the transportation department has worked well with



other city departments to take measures to reduce these numbers of incidents. There are a total number of 7630 roadways within HPFD response territory.

The table below highlights the relatively low number of vehicle incidents occurring within the CoHP.

Three Year Period (2013-2015)		
Incident type	Percentage	Number of calls
Auto Accident with Injuries	4%	1316
Motor vehicle/Pedestrian	< 1%	98
Auto Accident with no Injuries	3%	941

Rail Lines

CoHP lies along a major rail line that includes both freight and Amtrak services. Norfolk Southern and Amtrak lease rights to this section of railroad from North Carolina Railroad, which is 34 miles in length. The rail lines serve 20 industries and include 3,900 carload (332,000 tons) annually, with 25 freight and 8 Amtrak trains a day. Most common commodities include forest products, paper products, chemicals, brick, coal, cement, and furniture. Amtrak service at CoHP lies between Greensboro and Lexington and carried more than 40,000 people in 2012. An emergency response is in place to deal with responses that may occur within CoHP and HPFD response territories.

Airports

Piedmont Triad International Airport (PTIA) is located in close proximity of the CoHP. The PTIA operates as a separate entity with a standalone fire department. Surrounding agencies provide backup and mutual aid support. HPFD specifically supplies tankers for water support. HPFD operates in close coordination with PTIA as well as Guilford County Emergency Management. This enables HPFD to be cognizant of planning efforts as well as any joint resources that HPFD may be able to provide if needed.



Disaster Exposure:

Floods

Limited amounts of flooding occur, but there are small amounts of low lying areas, mostly creek beds and below Oak Hollow Dam. These areas can present flooding during times of extreme rainfall, but it is mostly infrequent and not an issue with the normal amounts of rainfall.

Wildland Interface

CoHP does not have any appreciable amount of open land, or wild land areas. There are a few parks but they are not sizeable in nature enough to call them open land. This is consistent with most urban/suburban areas of the East coast.

Wind Events

CoHP does not lie within an area as windy as the regions to the East or West, the mountains or coastal plain. Wind events here are produced by passing hurricane systems, or the infrequent tornado. Tornadoes have a higher result of doing more damage than hurricanes.

In April of 2010 a major tornado (EF3) struck the CoHP and resulted in damage to homes, resulting in 3 injuries and traveling nearly 5 miles through the CoHP. This resulted in a utilization of all available resources. CoHP Communications Center and HPFD were recognized as having an outstanding response by the City and residents. The response to this tornado resulted in increased preparedness preparation in the form of response forms and an enhanced GIS emergency management map.

Critical Infrastructure

The Hospital, water plant, sewer pump stations and power substations have reserve power in the form of generators. CoHP Communications Center has backup power and a backup location. CoHP fire stations have backup power with the exception of five facilities (6, 8, 9, 11 and the training center) which are in the planning stages of being installed as budget allows.



Physical Assets Protected

Government Buildings

Government buildings that are protected by HPFD include Federal, State, County and CoHP facilities.

Assemblies

Assemblies are not numerous, but there are churches, sports facilities, and theatres that allow for the public to congregate and assemble. Frequent parades, festivals, neighborhood block parties and other events allow for the public to gather. These events have to be approved by the Police Department in conjunction with HPFD, and OEM. This allows the CoHP as well as public safety departments to have an understanding of the event, the number of people attending and the activities involved.

Schools

CoHP has a total of 42 public and private schools including elementary, middle and high schools. Each school has had a pre-entry inspection completed so that city public safety has access to appropriate floor plans located within the computer aided dispatch (CAD) system. The public buildings are inspected by the County and private schools are inspected by HPFD every 2 years to ensure that proper procedures are in place in the event of an emergency in accordance with State laws and codes.

Medical Facilities

CoHP has one main hospital facility that is owned by UNC Healthcare with 351 beds and serves 120,000 patients annually. A smaller MedCenter owned by Cone Health is a satellite facility that specializes in emergency care and several specialized health services. Various other rehab and private medical group practices are located within the CoHP. HPFD frequently responds to these facilities, with the majority of calls being alarms.



Water / Waste Water Facilities

CoHP's primary water supply is delivered from a main water plant located on Pendleton St. Water is managed by the City, with supply coming from Oak Hollow Lake and City Lake. A secondary water supply is delivered from Piedmont Triad Regional Water Authority (PTRWA). This provides potable water for residents and businesses of CoHP. There are two wastewater treatment plants located on the East and West sides of CoHP. These serve as sewage waste treatment for the residents and businesses of CoHP.

Multi-storied Buildings

The majority of multi-storied buildings lie within the downtown district of CoHP. There are a few scattered buildings along business corridors North and South along Main Street as well as to the North and South along Eastchester. There are approximately 1,000 non-residential occupancies that are taller than 20' in height. There are a total of 600 plus buildings that range between 30' to over 100' in height.

Large "Box" Store Facilities (100,000 sq. ft. or larger)

CoHP contains a variety of traditional large box stores including Lowe's, Home Depot, Wal-Mart, and several large shopping centers. These buildings are up-to-code for standards set by the state of NC as well as local codes. The response of each of these buildings has been put in place to deal with the needed number of apparatus and firefighters, depending on the size of the building. These are traditionally called 2 ladder locations in HPFD response plans, thus allowing for an appropriate number of personnel and apparatus to deal with the size of the structure.



“Needed Fire Flow” Facilities (Need list)

Total of 2102 needed fire flow measurements were provided by ISO in the 2014 ISO site visit study. HPFD checked flow modeling to be sure that available water is appropriate based on what is needed, according to ISO calculations. The ISO needed measurements are provided in the chart below.

ISO Needed Fire Flow	Total
500 GPM or Less	154
501 to 1,000 GPM	553
1,001 to 2,000 GPM	900
2,001 to 3,000 GPM	354
3,001 GPM or Greater	141

Terrorism / WMD

The CoHP all-hazards preparedness program is led by the CoHP Office of Emergency Management (OEM), which lies within the HPFD. The CoHP OEM is responsible for the maintenance and revision of the CoHP Emergency Operations Plan (EOP), which serves to guide the management of emergencies and establishes the structure of response efforts in the field and in the City Coordination Center.

The known possible terrorism/WMD threats to the CoHP and the jurisdiction covered include a large international population increase for our High Point Market; a major railroad on which Norfolk Southern transports freight and Amtrak provides passenger service; the presence of major highway transportation routes (including I-74 and Business I-85/US 29/US70), underground pipelines transporting flammable/combustible liquids and liquefied gases, a large student population at High Point University, and the presence of numerous local and state governmental buildings.

Development and Population Growth

CoHP has had moderate growth in terms of new residential, commercial and industrial growth. As the city grows HPFD will need to keep pace and account for additional responses, covering



greater distances for travel time and accounting for increases in population and numbers of occupied structures. There is not a current model to account for the hiring of new personnel according to the cities growth rate.

Service Demand (Historical Data Driven Analysis)

Using historical data is an important aspect to HPFD's strategic planning management process. Response data including response times, response types, geographical responses, and various other factors all drive the planning process for service demand by HPFD. This includes an analysis of each Fire Demand Zone (FDZ) as well as population to ensure that responses are deemed appropriate.

Overview

On a daily basis, battalion chiefs plan the day and account for staffing for each company, the role of training for the day as well as any special activities, and communicate this amongst the department as well as with CoHP communications department. The risks in the community are well known throughout the department from pre-entry planning and community risk reduction program that has taken place. The operations division works closely with the inspection division to have open dialogue about occupancies within the territory. This allows for ample amounts of preparedness to ensure that the CoHP is protected and incidents are planned for with appropriate response plans and an effective response force.

Fire Demand Zone Call Volume

(1/1/2013-12/31/2015)

HPFD has a total of 14 station territories that house all emergency response apparatus within a first due area. These stations have been strategically placed to ensure that national standards (NFPA) are met in respect to drive times and coverage of the CoHP. These territories are split into sub categories, called geoproximities. These polygons dictate the total run order for a response. This ensures the appropriate response for second, third, fourth, etc. due, for a full response. The geoproximities vary in size, but average roughly .75 square miles each. There are a total of 240 geoproximities within the CoHP.

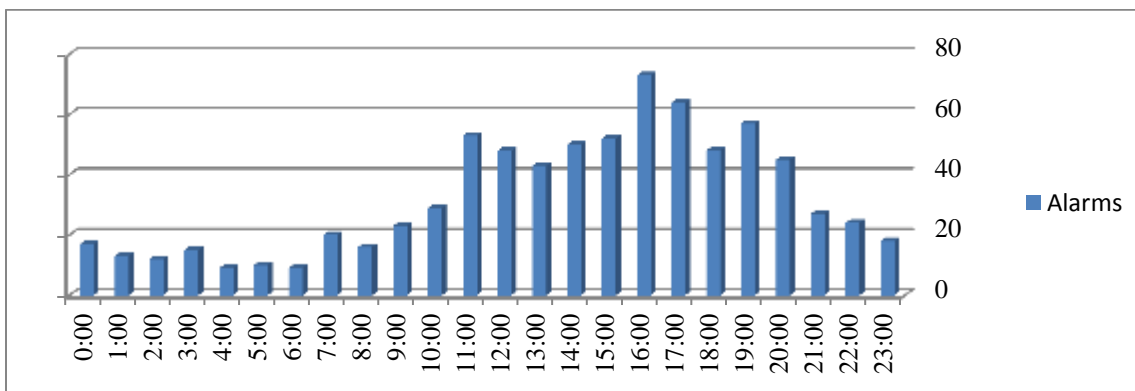


Types of calls dictate different responses by apparatus, therefore requiring a response layer, residing in the CAD software called Response Plan. HPFD utilizes this layer to map the fire demand zones, which help to determine the appropriate type and number of apparatus based on different call types as well as according to the different location types located within the CoHP. These FDZ (see Appendix A Fire Demand Call Zone Volume) areas help to paint a picture of where certain types of calls may occur as well as how HPFD can effectively deal with the call volume and associated risk types associated with each FDZ.

The fire demand zone ‘FRNO’ is by far the zone with the most calls in HPFD response territory. This is an area that the department has determined to have the most typical types of medical and fire calls. The table (see Appendix A Frequency of Incident Types) highlights the frequency of incidents by type by year. It is well known that HPFD’s overwhelming majority of calls are medical in nature, however each fire demand zone is studied for all types of incidents, not just fire calls.

Frequency of Fire Calls by Hour of Day

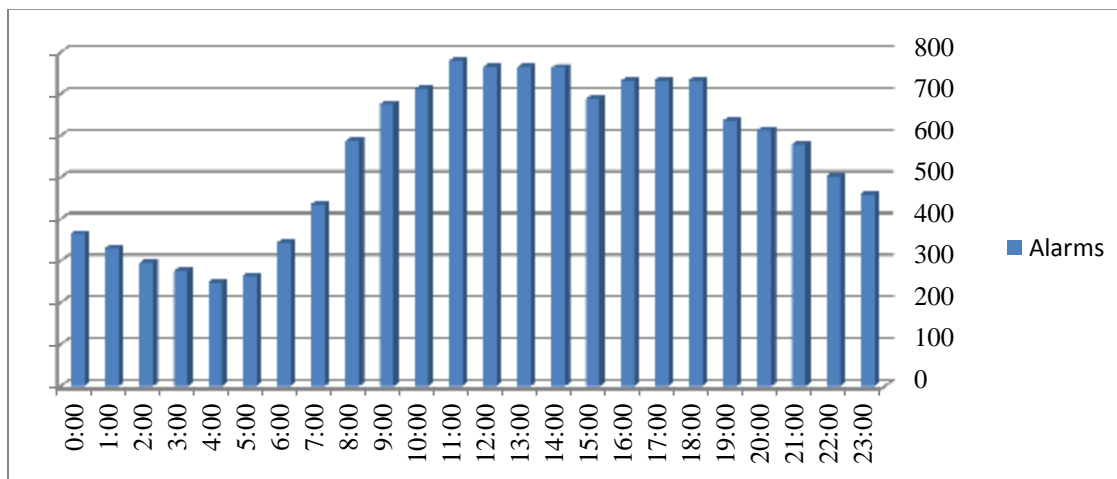
HPFD has determined that fire incident alarms most often occur between the hours of 9 am and 10 pm, with a peak between 4 and 5 pm.





Frequency of EMS Calls by Hour of Day

HPFD has determined that ems incident alarms most often occur between the hours of 7 am and midnight, with a peak between 11 am and 2 pm.



Fire station #1's area produces the majority of calls for the Department. Fire Stations 2, 4, 7 and 9 have a higher number of calls than others. The contributing factors for the call volumes include; socio-economic status, minimum standard housing, and a mix of industry and business use.

Fire Station Workload (2013-15)

Station	Responses	Percentage
1	5976	16.0%
2	3369	9.0%
3	2435	6.5%
4	3544	9.5%
5	1265	3.4%
6	2443	6.5%
7	3196	8.6%
8	2642	7.1%
9	3074	8.2%
10	2509	6.7%
11	1445	3.9%
12	481	1.3%
13	1724	4.6%
26	1210	3.2%
Total	35313	
Contract Areas	2027	



Risk Assessment Output

Risks are ever-changing, and include a variety of known and unknown incident types. There is no one answer, but rather an estimated approach to create a SOC, to ensure that the HPFD is ready to respond on any given day to any type of incidents that may occur.

Probability/Consequence

The HPFD has created this SOC to ensure that the proper response of apparatus, personnel and equipment can effectively deal with the threats to the CoHP. The HPFD used the SHUP form to determine the fire risk of all commercial properties in the territory.

- Low Risks: Low probability, low consequences, smaller sizes
- Medium Risks: Medium probability, medium consequences, medium sizes
- High Risks: Higher probability, higher consequences, larger sizes

Probability	Risk		
	Low	Medium	High
	1-Little/no risk	5- Some risk	9- Manageable risk
	2-Low risk	6- Elevated risk	10- High risk
	3-Elevated risk	7- Significant risk	11- Severe risk
	4- Moderate risk	8-High risk	12-Extreme risk

Risk Output Summary

Fire Risk

Incidents described as **low Fire risk** require minimum staffing. A full alarm assignment is automatically dispatched, first arriving officer may turn back units depending on the severity and nature of the incident. Tasks include extinguishment and investigation. These structures are normally less than 1,000 square feet. Examples are small storage facilities, residential storage shed, apartment clubhouse and vehicle fires next to structures.



Incidents described as **moderate Fire risk** require a standard first alarm assignment. Four engines, one or two ladders, one rescue and one battalion chief. Tasks include establishing a water supply, extinguishment, search and rescue, ventilation, salvage and investigation. These structures are normally up to 10,000 square feet. Examples are small mercantile facilities, restaurants, small office, and single family dwellings.

Incidents described as **high Fire risk** may require multiple alarm assignments. Tasks include the same as a moderate fire risk, including protecting exposures and removing victims. There is a high possibility for significant damage, high dollar loss and potential high loss of life. There is an increased potential for extinguishment of surrounding structures. These structures are greater than 10,000 square feet. Examples are chemical manufacturing facilities, schools, multifamily dwellings, multifamily high rise, nursing homes, hospitals, furniture showrooms and shopping centers.

EMS Risk

Incidents described as **low EMS risk** require minimum staffing. Usually these require a single engine response. These include all types of medical calls from minor to significant in nature from minor lacerations to cardiac events.

Incidents described as **moderate EMS risk** usually require a two unit response. These may include incidents such as CPR, obese lifting assistance, and motor vehicle accidents.

Incidents described as **high EMS risk** usually require multiple units or a full alarm response. These may include incidents such as an active shooter, mass causality incidents, and auto accidents on the Interstates and Highways.

Tech Rescue Risk

Incidents described as **low Tech Rescue risk** requires the 1st due Engine and Fire Utility (closest Ladder or Rescue). These calls include elevator rescue, minor entrapment (kids on playground equipment), locked in vehicle or room.



Incidents described as **moderate Tech Rescue risk** require the 1st due engine and very specific units depending on the nature of the call, i.e. confined space, trench rescue, high-angle, water rescue or highway response. The severity of the call may dictate more units for personnel, however the initial dispatch sends the appropriately trained teams for the nature of the incident. Examples are above ground tank or small vault rescue, minor injury in a high angle environment and victim stuck in mud past the knee level.

Incidents described as **high Tech Rescue risk** require the 1st due engine and very specific units depending on the nature of the call, i.e. confined space, trench rescue, high-angle, water rescue or highway response. The severity of the call may dictate more units for additional personnel after command size-up, however the initial dispatch sends the appropriately trained teams for the nature of the incident.

Hazmat Risk

Incidents described as **low HazMat risk** usually require the 1st due engine. These include small in size, small risk and/or low probability types of incidents. This would include vehicle accidents and smaller in quantity spills.

Incidents described as **moderate HazMat risk** usually require a specialized response including the closest 1st due Engine, 1 Battalion Chief, 1 Hazmat Engine, Hazmat Ladder and Hazmat 1. Examples are release of gases, significant fluid spill, chemical release inside of buildings, and any IDLH atmosphere involving hazardous materials.

Incidents described as **high HazMat risk** usually require a full hazmat team response including the decontamination team. Units include the closest 1st due Engine, 1 Battalion Chief, 2 Hazmat Engines, 1 Hazmat Ladder, and Hazmat 1 and 3. Examples are calls involving spills/releases of chemicals not described in Level 1 or 2, responses above or containers greater than 100 gallons of gasoline, diesel fuel, fuel oil, or kerosene; spills, leaks, or releases of unknown origin or unknown material; or by the request of the incident commander at any scene.



Critical Task Analysis

These critical tasks are necessary to control a basic structure fire as defined in NPFA 1710:

- **Command:** First unit to arrive on scene responsible for the completion of the tactical priorities and incident stabilization.
- **Water Supply:** A steady water supply must be secured during any fire event. This is achieved from a positive water source or alternative means.
- **Pump Operator:** Water must be supplied at safe discharge pressures through hose and appliances in order to place the correct amount of gallons per minute (g.p.m.) to absorb the British Thermal Units (b.t.u.). These discharge pressures must be constantly monitored to maintain continuous uninterrupted water flow. This task requires one firefighter per apparatus supplying or pumping water.
- **Safety Officer:** Per NFPA 1521 this person needs to recognize changing conditions on an emergency scene to prevent unsafe activities and monitor dangerous situation or conditions.
- **Fire Control:** The physical act of putting water on the seat of the fire to stop forward progression and ultimately extinguishment by a firefighter team.
- **Back-up Line:** A firefighting team responsible for assisting the primary attack line in fire control or protection of the primary nozzle team.
- **Rapid Intervention Team (RIT):** A team of two or more firefighters held in reserve; dedicated solely to the search and rescue of other firefighters in distress.
- **Ventilation:** A systematic removal of heat, smoke and toxic gases from a building and replacing it with fresh air.
- **Exposure Control:** Application of water in large quantities to prevent the continued spread of fire to adjacent buildings.
- **Utilities:** Water, Gas and Electric meters must be controlled in the event of a fire.
- **Search:** If a structure is involved in fire, firefighting crews will make an attempt to complete a primary and secondary search for the presence of occupants.
- **Rescue:** Occupants that are located by search or nozzle teams must be quickly removed from the structure.



- **Salvage:** The third incident priority; the protection of buildings and their contents from unnecessary damage due to water, smoke heat and other elements.
- **Investigator:** This person is responsible for performing investigations as required.

Fire Risk

Critical Task Table - Low Risk Fire

Task	Needed Personnel
Command	1
Pump Operations	1
Attack Line Operations	2
Hydrant	1
Total	5

Apparatus	Minimum Staff
4 Engines	12
1 Rescue	2
1 Ladder	3
1 Battalion Chief	1
Total	18



Critical Task Table - Moderate Risk Fire

Task	Needed Personnel
Command	1
Safety	1
Pump Operations	1
Attack Line Operations	6
Backup Line Operations	2
Search and Rescue	2
Ventilation	2
Rapid Intervention	2
Hydrant	1
Total	18

Apparatus	Minimum Staff
4 Engines	12
1 Rescue	2
1 Ladder	3
1 Battalion Chief	1
Total	18



Critical Task Table - High Risk Fire

Task	Needed Personnel
Command	1
Safety	1
Pump Operations	1
Attack Line Operations	6
Backup Line Operations	2
Search and Rescue	2
Ventilation	2
Rapid Intervention	2
Exposure Protection	2
Hydrant	1
Utilities	1
Total	21

Apparatus	Minimum Staff
4 Engines	12
1 Rescue	2
2 Ladders	6
1 Battalion Chief	1
Total	21



EMS Risk

Critical Task Table - Low Risk EMS

Task	Needed Personnel
Patient Care	3 or 2
Total	3 Or 2

Apparatus	Minimum Staff
1 Engine (1 st due)	3
Or*	
1 Rescue	2
Total	3 OR 2

*Dictated by location of incident and closest unit type

Critical Task Table - Moderate Risk EMS

Task	Needed Personnel
Patient Care	5 or 6
Total	5 or 6

Apparatus	Minimum Staff
1 Engine (1 st due)	3
1 Fire Utility*	3 or 2
Total	5 or 6

*Fire Utility (CAD picks closest Ladder or Rescue)



Critical Task Table - High Risk EMS

Task	Needed Personnel
Command	1
Patient Care	6
Safety	1
Operations	1
Rescue	2
Scene Stabilization	2
Extrication	2
Total	15

Apparatus	Minimum Staff
4 Engines	12
1 Rescue	2
1 Ladder	3
1 Battalion Chief	1
Total	18



Tech Rescue Risk

Critical Task Table - Technical Rescue

Task	Needed Personnel
Command	1
Operations	1
Safety	1
Search and Rescue	2 to 6
Extrication	2 to 4
Patient Care	2 to 4
Total*	9-18

*Total depends on the nature
of the call

Apparatus	Minimum Staff
Trench, Structural Collapse, High Angle, Confined	18
Water Rescue	13
Pin-in/Rollover Extrication	9



Hazmat Risks

Critical Task Table - Hazmat

Task	Needed Personnel
Command	1
Safety	1
Operations	1
Hazmat Group	8
Monitoring (Atmospheric)	1
Rehabilitation/Vitals	1
Medical Monitoring	1
Decontamination	3
Logistics	1
Research	1
Total	19

Apparatus	Minimum Staff
1 Engine (1 st due)	3
2 Hazmat Engine (2 and 8)	6
2 Hazmat 1 and 3	6
1 Hazmat Ladder (Lad 2)	3
1 Battalion Chief	1
Total	19



Historical Perspective and System Performance

Distribution

Distribution in respect to SOC relates to the placement of fire facilities and apparatus to appropriately respond to the different types of incidents that occur within the fire district. HPFD has worked diligently the last 5 years to create response types and place apparatus strategically so that the HPFD can respond in an efficient manner, and provide the best response to the Citizens and visitors of the CoHP.

Concentration

The strategic planning management process has included reporting response times and tracking response numbers by company and apparatus, to indicate an effective SOC and efficient response times. A recent ISO inspection in 2014 has resulted in a PPC Class 1 ISO rating, indicating that we are meeting national standards. The HPFD will continue to strive to improve on these response times and plan on meeting a higher standard than the national averages.

Concentration of units refers to the strategic placement of apparatus to meet or exceed national standards; this ensures that an effective response force is capable and appropriate as determined by the incident types. The tables below indicate fractal response times to gain a better understanding of how HPFD operates, indicating a level of concentration to meet or exceed national response standards.

First 4 personnel¹

Fire fractal times

2013-15	90%
Dispatch	0:00:54
Reaction	0:01:33
Travel	0:04:55
Response	0:06:08

¹ HPFD staffs a minimum of 3 personnel per apparatus, which necessitates counting staffing per incident to determine the first 4 arriving personnel. Additional staffing could drastically decrease this reported response time.



High Point Fire Department- Standard of Cover 2016

Area, Road Miles, Population, and Dwelling Units per first due company:

Station	Population	Road Miles	Area	Dwelling Units
1	9219	54.9	2.5	6516
2	3805	43.5	1.9	4562
3	7368	73.1	5.7	5100
4	9914	88.3	6.2	7296
5	8711	68.8	6.1	4837
6	5489	59.3	4.5	4242
7	9926	65.1	4.6	5295
8	5371	58.5	4.1	4505
9	10011	144.1	6.6	6386
10	13168	81.6	7.1	6410
11	8399	78.7	6.6	5768
12	4943	35.3	3.9	2165
13	9008	43.1	3.2	4306
26	4511	65.5	8.0	1994
Total	109,843	959.8	70.9	69,382

Source: 2010 US Census Data and CoHP GIS Data

Area, Road Miles, Population, and Dwelling Units per first due company by percentage:

Station	Population	Road Miles	Area	Dwelling Units
1	8.4%	5.7%	3.6%	9.4%
2	3.5%	4.5%	2.7%	6.6%
3	6.7%	7.6%	8.0%	7.4%
4	9.0%	9.2%	8.8%	10.5%
5	7.9%	7.2%	8.7%	7.0%
6	5.0%	6.2%	6.3%	6.1%
7	9.0%	6.8%	6.4%	7.6%
8	4.9%	6.1%	5.7%	6.5%
9	9.1%	15.0%	9.3%	9.2%
10	12.0%	8.5%	10.0%	9.2%
11	7.6%	8.2%	9.3%	8.3%
12	4.5%	3.7%	5.5%	3.1%
13	8.2%	4.5%	4.5%	6.2%
26	4.1%	6.8%	11.2%	2.9%
Total	109,843	959.8	70.9	69,382

Source: 2010 US Census Data and CoHP GIS Data



HPFD tracks response types to enable proper assessment of apparatus placement and effective response force. By understanding the call types, call volume and geographic placement of calls, HPFD can better utilize planning resources for proper placement of apparatus and personnel.

Reliability

An important aspect to measure station and apparatus placement, distribution and concentration is the effectiveness of units to respond effectively and in a timely manner. Reliability looks at the number and percentage of times that a first due unit was able to respond in a timely manner, to an incident that occurred within that territory. These numbers will continue to be analyzed to help determine the best case scenarios for all apparatus and station placement, depending on call volume and call loads. HPFD's reliability rate overall has been 98.52%.

Station 1	Percentage
First Due Station	97.14%

Station 8	Percentage
First Due Station	98.92%

Station 2	Percentage
First Due Station	98.03%

Station 9	Percentage
First Due Station	99.11%

Station 3	Percentage
First Due Station	98.62%

Station 10	Percentage
First Due Station	96.45%

Station 4	Percentage
First Due Station	99.30%

Station 11	Percentage
First Due Station	99.09%

Station 5	Percentage
First Due Station	99.05%

Station 12	Percentage
First Due Station	98.15%

Station 6	Percentage
First Due Station	98.67%

Station 13	Percentage
First Due Station	99.31%

Station 7	Percentage
First Due Station	98.44%

Station 26	Percentage
First Due Station	98.94%



Comparability

HPFD comparison chart based on common indicators of response times from NFPA 1710 standards, including response times from all calls within timeframe 1/1/2013-12/31/2015.

Performance Measure	NFPA Standard 90% Reliability Minutes : Seconds	HPFD Performance 90% Reliability Minutes : Seconds
Call Processing	≤ 1:00	0:54
Turn out	≤ 1:20	1:33
Travel time, 1 st 4 personnel	≤ 4:00	4:35
Travel time, Effective Response Force (Fire)	≤ 8:00	5:59

Performance Objectives and Measures

Baseline / Benchmark Performance and Agency Response Times

Structure Fire Responses

HPFD's baseline numbers reported below indicate actual performance for the year 2013-2015. HPFD does not rely on mutual aid for effective response force total personnel numbers; however there are agreements in place to aid in safety and to provide additional resources and personnel when needed.

Benchmark Performance:

For 90 percent of all structural fire responses, the total benchmark response time for a minimum of 4 firefighters, should be 5 minutes 48 seconds in all areas. HPFD should be capable of providing 500 gallons of water and 1,500 gallons per minute (gpm) pumping capacity; initiating command; providing a size-up for incoming units, establishing an positive uninterrupted water supply; initiating immediate rescue for at-risk victims or advancing the initial attack line for incident stabilization, also providing for property conservation. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.



For 90 percent of all structural responses, the total benchmark response time for the arrival of the effective response force (ERF), staffed with 15 firefighters, should be 8 minutes 49 seconds in all areas of the department. The ERF shall be capable of: establishing command; appointing a site safety officer; establishing an positive uninterrupted water supply; searching and initiating immediate rescue for at-risk victims; advancing an attack line and a backup line for fire incident stabilization; complying with the Occupational Safety and Health Administration (OSHA) requirements of two-in and two-out; completing forcible entry; ventilating the structure; controlling utilities; and performing loss control for property conservation. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Baseline Performance:

For 90 percent of all structural responses, the total baseline response time for a minimum of 4 firefighters, has been 6 minutes 8 seconds in all areas. HPFD is capable of providing 500 gallons of water and 1,500 gallons per minute (gpm) pumping capacity; initiating command; providing a size-up for incoming units, establishing an positive uninterrupted water supply; initiating immediate rescue for at-risk victims or advancing the initial attack line for incident stabilization, also providing for property conservation. These operations are completed in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all structural responses, the total baseline response time for the arrival of the effective response force (ERF), staffed with 15 firefighters, has been 9 minutes 9 seconds in all areas of the department. The ERF has been capable of: establishing command; appointing a site safety officer; establishing an positive uninterrupted water supply; searching and initiating immediate rescue for at-risk victims; advancing an attack line and a backup line for fire incident stabilization; complying with the Occupational Safety and Health Administration (OSHA) requirements of two-in and two-out; completing forcible entry; ventilating the structure; controlling utilities; and performing loss control for property conservation. These operations have been done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.



High Point Fire Department- Standard of Cover 2016

The Total effective response force is measured based on the NFPA 1710 standard, counting 15 personnel on a structure fire. HPFD sends an additional engine, for safety reasons and additional personnel, equaling a minimum of at least 18 or more personnel on scene of all structure fires.

Moderate Structure Fires - 90th Percentile Times – Baseline Performance		2013 - 2015	2015	2014	2013
Alarm Handling	Pick-up to Dispatch	0:54	0:59	0:54	0:49
Turnout Time	Turnout Time 1st Unit	1:33	1:26	1:33	1:41
Travel Time	Travel Time 1st Unit Distribution	4:55	4:44	5:12	4:49
	Travel Time ERF Concentration	6:12	6:08	6:05	6:23
Total Response Time	Total Response Time 1st Unit On Scene Distribution	6:08	6:08	6:14	6:03
	Total Response Time ERF Concentration	9:09	9:08	9:01	9:18



Technical Rescue

The agency's baseline statements reflect actual performance during 2013 to 2015. The agency does not rely on the use of mutual aid or automatic aid from neighboring fire departments to provide its effective response force complement of personnel. These resources are immediately available as part of a seamless response system. The agency's actual baseline service level performance is as follows:

Benchmark Performance:

For 90 percent of all technical responses, the total benchmark response time for a minimum of 3 firefighters, should be 6 minutes 18 seconds in all areas. HPFD shall be capable of establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all technical responses, the total benchmark response time for the arrival of the effective response force (ERF), of 18 people for Trench, Structural Collapse, High Angle or Confined Space Rescue, 13 people for Water Rescue, and 9 people for Pin-in/Rollover Extrication. Should be 9 minutes 20 seconds in all areas of the department. The ERF shall be capable of: appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents; and providing first responder medical support.

Baseline Performance:

For 90 percent of all technical responses, the total baseline response time for a minimum of 3 firefighters, has been 6 minutes 25 seconds in all areas. HPFD is capable of establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all technical responses, the total baseline response time for the arrival of the effective response force (ERF), which varies depending on the nature of the call, has been 8 minutes 17 seconds in all areas of the department. The ERF has been capable of: appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical



High Point Fire Department- Standard of Cover 2016

expertise, knowledge, skills, and abilities during technical rescue incidents; and providing first responder medical support.

Total effective response force cannot be measured due to less than 10 incidents during the reporting period.

Technical Rescue - 90th Percentile Times – Baseline Performance		2013 - 2015	2015	2014	2013
Alarm Handling	Pick-up to Dispatch	1:11	0:58	1:25	1:11
Turnout Time	Turnout Time 1st Unit	1:24	1:25	1:17	1:30
Travel Time	Travel Time 1st Unit Distribution	4:51	4:39	4:53	5:02
Total Response Time	Total Response Time 1st Unit On Scene Distribution	6:25	5:20	6:50	7:05



Hazmat Responses

The agency's baseline statements reflect actual performance during 2013 to 2015. The agency does not rely on the use of mutual aid or automatic aid from neighboring fire departments to provide its effective response force complement of personnel. These resources are immediately available as part of a seamless response system. The agency's actual baseline service level performance is as follows:

Benchmark Performance:

For 90 percent of all hazmat responses, the total benchmark response time for a minimum of 3 firefighters, should be 6 minutes 18 seconds in all areas. HPFD shall be capable of establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone then mitigation of the scene.

For 90 percent of all hazmat responses, the total benchmark response time for the arrival of the effective response force (ERF), of 19 people, should be 9 minutes 20 seconds in all areas of the department. The ERF shall be capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Baseline Performance:

For 90 percent of all hazmat responses, the total baseline response time for a minimum of 3 firefighters, has been 6 minutes 52 seconds in all areas. HPFD is capable of establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone then mitigation of the scene.

For 90 percent of all hazmat responses, the total baseline response time for the arrival of the effective response force (ERF), has been 7 minutes 54 seconds in all areas of the department. The ERF has been capable of: appointing a site safety officer; and providing the equipment,



technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Total effective response force cannot be measured due to less than 10 incidents during the reporting period.

Hazardous Materials - 90th Percentile Times — Baseline Performance		2013 - 2015	2015	2014	2013
Alarm Handling	Pick-up to Dispatch	0:42	0:37	0:36	0:44
Turnout Time	Turnout Time 1st Unit	1:41	:50	1:50	1:16
Travel Time	Travel Time 1st Unit Distribution	4:17	3:08	4:50	3:20
Total Response Time	Total Response Time 1st Unit On Scene Distribution	6:41	5:30	6:54	5:18



EMS Responses

The agency's baseline statements reflect actual performance from 2013 to 2015. The agency acts as first responder for Guilford, Randolph, Forsyth and/or Davidson County EMS for basic EMT. Guilford County Emergency Medical Service, Piedmont Triad Ambulance and Rescue, Forsyth, Randolph and Davidson County Ambulance Services provide patient transport services. These resources are immediately available as part of a seamless response system. The agency's actual baseline service level performance is as follows:

Benchmark Performance:

For 90 percent of all EMS responses, the total benchmark response time for a minimum of 2 firefighters, should be 5 minutes 40 seconds in all areas. HPFD shall be capable of Basic Life Support: assessing scene safety and establishing command; sizing-up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid including automatic external defibrillation (AED); Narcan, Breathing treatments including oxygen therapy and nebulizer treatments and assisting transport personnel with packaging the patient.

The agency acts as first responder for Guilford, Randolph, Forsyth and/or Davidson County EMS, to complete the effective response force (ERF) of 2 people in 5 minutes 40 seconds, component of its EMS program. The initial arriving fire department company shall have the capabilities of providing first responder medical aid including AED, until the EMS provider arrives on scene. If EMS units arrives on scene first, its personnel shall initiate care and the staff from the initial fire department company shall provide support as needed.

Baseline Performance:

For 90 percent of all EMS responses, the total baseline response time for a minimum of 2 firefighters, has been 5 minutes 57 seconds in all areas. HPFD is capable of Basic Life Support: assessing scene safety and establishing command; sizing-up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid including automatic external defibrillation (AED); Narcan, Breathing treatments including oxygen therapy and nebulizer treatments and assisting transport personnel with packaging the patient.



High Point Fire Department- Standard of Cover 2016

The agency acts as first responder for Guilford, Randolph, Forsyth and/or Davidson County EMS, to complete the effective response force (ERF), of 2 people, component of their EMS programs, has been 6 minutes and 19 minutes. The initial arriving fire department company has the capabilities of providing first responder medical aid including AED, until the EMS provider arrives on scene. If EMS units arrive on scene first, its personnel shall initiate care and the staff from the initial fire department company shall provide support as needed.

Total effective response force is not measured by a standard based on a certain number of personnel. These times reflect the total number of dispatched units. This varies depending on the types of EMS nature codes, therefore a total number of reported personnel cannot be obtained.

EMS - 90th Percentile Times – Baseline Performance		2013 - 2015	2015	2014	2013
Alarm Handling	Pick-up to Dispatch	0:37	0:33	0:45	0:34
Turnout Time	Turnout Time 1st Unit	1:31	1:37	1:32	1:24
Travel Time	Travel Time 1st Unit Distribution	4:25	4:22	4:26	4:27
	Travel Time ERF Concentration	4:39	4:42	4:38	4:38
Total Response Time	Total Response Time 1st Unit On Scene Distribution	5:57	5:57	6:00	5:56
	Total Response Time ERF Concentration	6:19	6:13	6:25	6:20



Performance Objectives and Measures

Response Service Level Objectives (Performance Objectives and Measures)

HPFD has completed a risk analysis utilizing the SHUP classification form, reviewing current response standards and detailing effective response force. These studies had just taken place, moving engine and ladder companies, removing squad units and adding a rescue unit within 2014. This SOC adds to that process by detailing the associated risks, and compiling all of the response standards in a formatted document.

HPFD plans on completing the ongoing pre-entry process and revisiting the risk classification process by utilizing a more robust form such as the OVAP form, considering more datasets and criteria, to create a more accurate risk analysis. At that time response standards and company moves may take shape, as we become more aware of possible risks detailed in a more in-depth analysis.

Response Objective Methodology

HPFD has used the methodology set forth by CFAI as outlined in the Fire and Emergency Service Self-Assessment Manual. The 1st arriving unit and effective response force (ERF) time utilized within this SOC is based on three years' worth of HPFD emergency incidents for fire and non-fire emergency incidents (1/1/2013-12/31/2015).

Response Objective Compliance Reporting

HPFD switched record management systems directly in the middle of the three year reporting period. This created challenges in reporting the data and information used within this SOC document. The first half of data (1/1/2013-6/30/2014) was created from Crystal Reports, pulling from archived data utilizing a Fire Info RMS database. The second half of data (7/1/2014-12/31/2015) was created using Crystal Reports, pulling from the newly acquired dataset within the current Firehouse RMS database.

HPFD intends to utilize Firehouse standard reports for future reporting, the department continually trains and is becoming more familiar with the current RMS. The ongoing reporting the department has been included in for the UNC School of Government benchmarking project,



and in-house Performance Measures reporting, placed HPFD in a good position to be able to report the numbers needed for the Accreditation project.

The use of Firehouse reporting as well as the newly acquired program, RePortal Software, will enable HPFD to organize, manage and execute existing Crystal Reports in an efficient fashion. This enhanced reporting will be easier for HPFD to continue with its strategic planning management process, and enhance the reporting capabilities of the department.

Response Standards/Standards of Cover

“Standards of cover are defined as those written policies and procedures that establish the distribution and concentration of fixed and mobile resources of an organization” (CFAI Self-Assessment Manual, p. 43)

Like many similarly sized departments, HPFD has historically utilized averages in reporting response times. Through the accreditation process, fractal reporting using 90% standard times has been used. This allows HPFD to look at response times more closely, and better understand the performance of HPFD response times, and what is occurring the majority of the time.

System Wide Performance Objectives

HPFD reports response times every six months for 2 reports (UNC School of Government Benchmarking Project and CoHP performance measures report). These times allow the HPFD to monitor and gauge the performance of the HPFD. Using the benchmarking project the HPFD has an open dialogue with similarly sized Departments that allows for comparison. Response times will be monitored during the strategic planning management process. The response times and objectives are listed below:

Fractal call processing time baseline has been 0:54.

Fractal call processing time benchmark will be 0:50.



Response Objectives for Turnout Time – All Calls

Fractal turnout time **baseline** has been 1:34 seconds or less 90% of the time

Fractal turnout time **benchmark** will be 1:20 seconds or less 90% of the time

Response Objectives for Travel Time (4 personnel) – All Calls

Fractal travel time **baseline** has been 4:35 or less 90% of the time

Fractal travel time **benchmark** will be 4:15 or less 90% of the time

Fire

- Fractal 1st arriving (4 firefighters) response time **baseline** has been 6:08 or less 90% of the time.
- Distribution 1st arriving (4 firefighters) response time **benchmark** for Fire – The 1st arriving four (4) firefighters should meet 5:48 for 90% of all requests for emergency service.
- Fractal ERF assignment fifteen (15 personnel) time **baseline** has been 9:19 or less 90% of the time.
- Concentration Performance **benchmark** for Fire – Low: An ERF assignment of fifteen (15 personnel) or more, should arrive within 8:49 response time for 90% of all requests for structure fires.
- Concentration Performance **benchmark** for Fire – Moderate: An ERF assignment of fifteen (15 personnel) or more, should arrive within 8:49 response time for 90% of all requests for structure fires.
- Concentration Performance **benchmark** for Fire – High: An ERF assignment of fifteen (15 personnel) or more, should arrive within 8:49 response time for 90% of all requests for structure fires. *HPFD normal response for high risk structure fires is 21 personnel.*



EMS

- Fractal response time **baseline** has been 5:57 or less for the arrival of the 1st HPFD unit 90% of the time.
- Distribution Performance **benchmark** for EMS – All: The first HPFD unit staffed with a minimum of 2 or 3* personnel should arrive within 5:37 for 90% of all requests for medical service.
- Fractal ERF (2 or more units) response time **baseline** has been 6:19 or less 90% of the time.
- Concentration Performance **benchmark** for EMS – Low: The same as distribution performance goal.
- Concentration Performance **benchmark** for EMS – Moderate: An ERF assignment or 5 or 6 personnel* should arrive within 5:59 for 90% of all requests for medical service.
- Concentration Performance **benchmark** for EMS – High: An ERF assignment of fifteen (15 personnel) or more, should arrive within 8:49 response time for 90% of all requests for large scale medical events. *HPFD normal response for high risk EMS is 18 personnel.*

* CAD picks closest Ladder or Rescue



Rescue

- Fractal response time **baseline** has been 6:25 or less for the arrival of the 1st HPFD unit 90% of the time.
 - Distribution Performance **benchmark** for Technical Rescue – All: The first HPFD unit staffed with a minimum of 5 or 6* personnel should arrive within 6:05 for 90% of all requests for technical rescue.
 - Fractal ERF (2 or more units) response time **baseline** has been 8:17 or less 90% of the time.
 - Concentration Performance **benchmark** for Technical Rescue – Low: The same as distribution performance goal.
 - Concentration Performance **benchmark** for Technical Rescue – Moderate: An ERF assignment of 9-18 personnel** should arrive within 7:57 for 90% of all requests for technical rescue.
 - Concentration Performance **benchmark** for Technical Rescue – High: An ERF assignment of 9-18 personnel** should arrive within 7:57 response time for 90% of all requests for technical rescue.
- * CAD picks closest Ladder or Rescue
- ** Total personnel depends on the nature of the call and risk (Water, Trench, High-angle, Confined Space, Collapse)



Hazmat

- Fractal response time **baseline** has been 6:52 or less for the arrival of the 1st HPFD unit 90% of the time.
- Distribution Performance **benchmark** for Hazmat – All: The first HPFD unit staffed with a minimum of 3 personnel should arrive within 6:05 for 90% of all requests for hazmat events.
- Fractal ERF (2 or more units) response time **baseline** has been 7:54 or less 90% of the time.
- Concentration Performance **benchmark** for Hazmat – Low: The same as distribution performance goal.
- Concentration Performance **benchmark** for Hazmat – Moderate: An ERF assignment of 12 personnel should arrive within 7:34 for 90% of all requests for hazmat events.
- Concentration Performance **benchmark** for Hazmat – High: An ERF assignment of 19 personnel should arrive within 8:49 response time for 90% of all requests for hazmat events.



Overall Evaluation

HPFD provides an overview of the SOC document in this section. The accreditation process has enabled HPFD to perform an in-depth assessment, review performance-based measurements, review and announce risks within the community, review the effective response force and response requirements and determine areas that need improvement. This in-depth review has enabled HPFD to bring these items front and center and set the groundwork for future reviews of these items throughout the strategic management planning process.

Baseline and Current Performance Measures

The historical measurements of response time reporting has given HPFD an advantage, in that this has historically been a hot topic, with regards to efficient response times being placed as a high priority. HPFD will continue to look at ways to challenge the department to meet and exceed NFPA response times, to continue to serve the CoHP in an efficient manner. The use of enhanced CAD system dispatching features including automatic vehicle locator (AVL) dispatch and geographic positioning systems (GPS) auto-enroute and auto-arrive, as well as a state of the art station alerting system will be implemented to ensure that the proper and efficient response of apparatus is a continual process of self-improvement. HPFD will also continue to foster an already great relationship with the CoHP 911 Communications Center, to continue to build robust response plans that delve into more accurate apparatus response.

Historical Performance

HPFD has historically worked on reducing its response times through the 2000's. This has set the stage for the current administration to continue this decrease and measuring performance for the goals of creating reduced response times. It is noted that calls of service are most prevalent between 11am and 5pm. Fire calls are mostly occurring in in the heaviest of urban areas. With a gradual increase in population and call volume, this is something to be aware of for planning purposes of the department moving forward. Increases in revitalization of urban areas, as well as continued growth to the North and West will also drive an increased presence of performance measurement.



Identification of Community Risks

Using the SHUP form, HPFD has gained a better understanding of the risks associated to response, and how to better prepare for emergencies within the department response area. As HPFD continues to complete pre-entries, the data will become more robust so that a more diverse set of data will be utilized, painting a better picture of the associated risk within the CoHP. During the re-accreditation process, HPFD will utilize this newer risk dataset and report the findings at that time.

Company Distribution and ERF Analysis

HPFD has historically worked very closely with the CoHP communications center and dispatchers to develop in-depth response plans. A dedicated HPFD GIS analyst position has enabled the department to have a better understanding of how to setup, monitor and make changes to these response plans. The associated CoHP risk analysis, ERF study and general knowledge of the CoHP will enable HPFD to closely monitor and make changes as necessary to the distribution of units and personnel. These changes will be driven by new development, an increase in population and a general drive by the department to better serve the citizens and visitors of the CoHP. No response changes are being made at this time due to the limited amount of data and criteria in the SHUP form. HPFD will continue to complete pre-entries on every occupancy so that prior to a second accreditation study, HPFD can utilize a more robust target hazard classification such as the OVAP. This will enable life safety to be taken into consideration. This will likely increase the number of 2 ladder responses.



Reliability Analysis

HPFD has responded to incidents with an 98.52% overall reliability rate. This indicates that while coverage seems adequate there needs to be an increase in the reliability rate. With many hours spent on non-emergency responses, training, and professional development, the addition of personnel, apparatus and station facilities can help to reduce response times and better serve the CoHP.

Station 1	Percentage
First Due Station	97.14%

Station 8	Percentage
First Due Station	98.92%

Station 2	Percentage
First Due Station	98.03%

Station 9	Percentage
First Due Station	99.11%

Station 3	Percentage
First Due Station	98.62%

Station 10	Percentage
First Due Station	96.45%

Station 4	Percentage
First Due Station	99.30%

Station 11	Percentage
First Due Station	99.09%

Station 5	Percentage
First Due Station	99.05%

Station 12	Percentage
First Due Station	98.15%

Station 6	Percentage
First Due Station	98.67%

Station 13	Percentage
First Due Station	99.31%

Station 7	Percentage
First Due Station	98.44%

Station 26	Percentage
First Due Station	98.94%



Critical Issues and Service Gaps

After review by the internal stakeholder group during the strategic planning management process meetings, the following issues and gaps in service were documented and will be addressed.

These also follow guidelines placed in the Strategic Plan coming from the goals and objectives.

These opportunities reflect the issues identified by the group as items that need to be addressed in the future to be certain that HPFD can provide the appropriate levels of service for the CoHP and its visitors.

Theme	Opportunity
Budget	Continue to work with CoHP purchasing on budget processes.
Facilities	Repair existing, replace aging and match community growth with new facilities.
Fleet	Repair existing, replace aging and match community growth with new apparatus.
Staffing	Continued training for existing staff, and match community growth with new employees/personnel.
Internal Comm.	Continued strategic planning management process meetings to communicate Departments goals and objectives in the quest for fire service excellence.
Training	Increased type and degree of personnel training.
SOG's	Revise existing, create new, and update policies and procedures.

These issues and service gaps will be addressed in the future strategic planning management process meetings, along with future SWOT analysis to ensure appropriate planning and future growth of the HPFD. This standard of cover document and resulting risk assessment enabled HPFD to determine associated risks within the CoHP, and to set goals and objectives, as well as realize critical issues and services gaps.

The risk analysis and assessment has helped HPFD to identify issues and service gaps that the Department has to the CoHP. These issues are derived from the risk analysis and historical



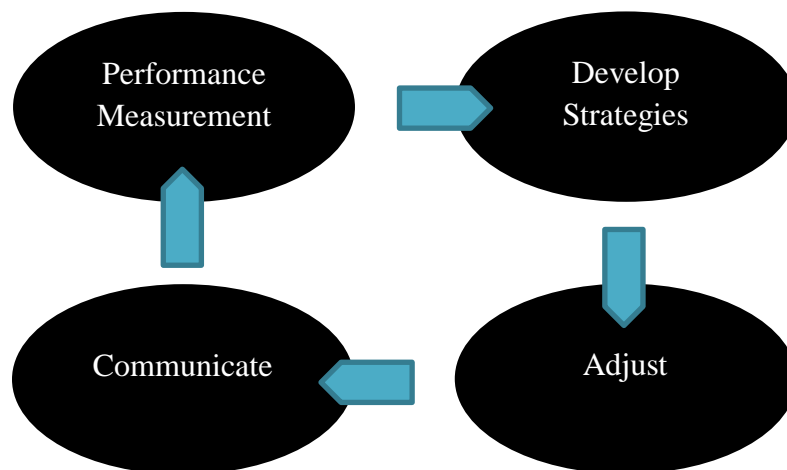
performance baseline response time measurements. The turnout time service gaps in response times needs to be studied more in depth, to ensure that the CAD system is operating efficiently and accurately. The GPS auto-enroute and auto-arrive feature will standardize this process and make tracking more accessible and accurate.

Through the risk analysis study we identified working fires that were reported as fire alarm incidents, and did not receive appropriate staffing. In turn, we will increase our fire alarm responses to meet minimum structural response standards (15 personnel). Also through risk assessment we identified big box properties, and other high risks that need a 2 ladder response.

Compliance Methodology

The HPFD has finalized this initial SOC and offers the following compliance methodology:

- Establish / Review / Evaluate Performance Measures (semi-annual)
- Develop / Review Compliance Strategies (ongoing)
- Communicate Expectations to Organization / Stakeholders (semi-annual)
- Audit System for Necessary Adjustments / Continual Process (ongoing)

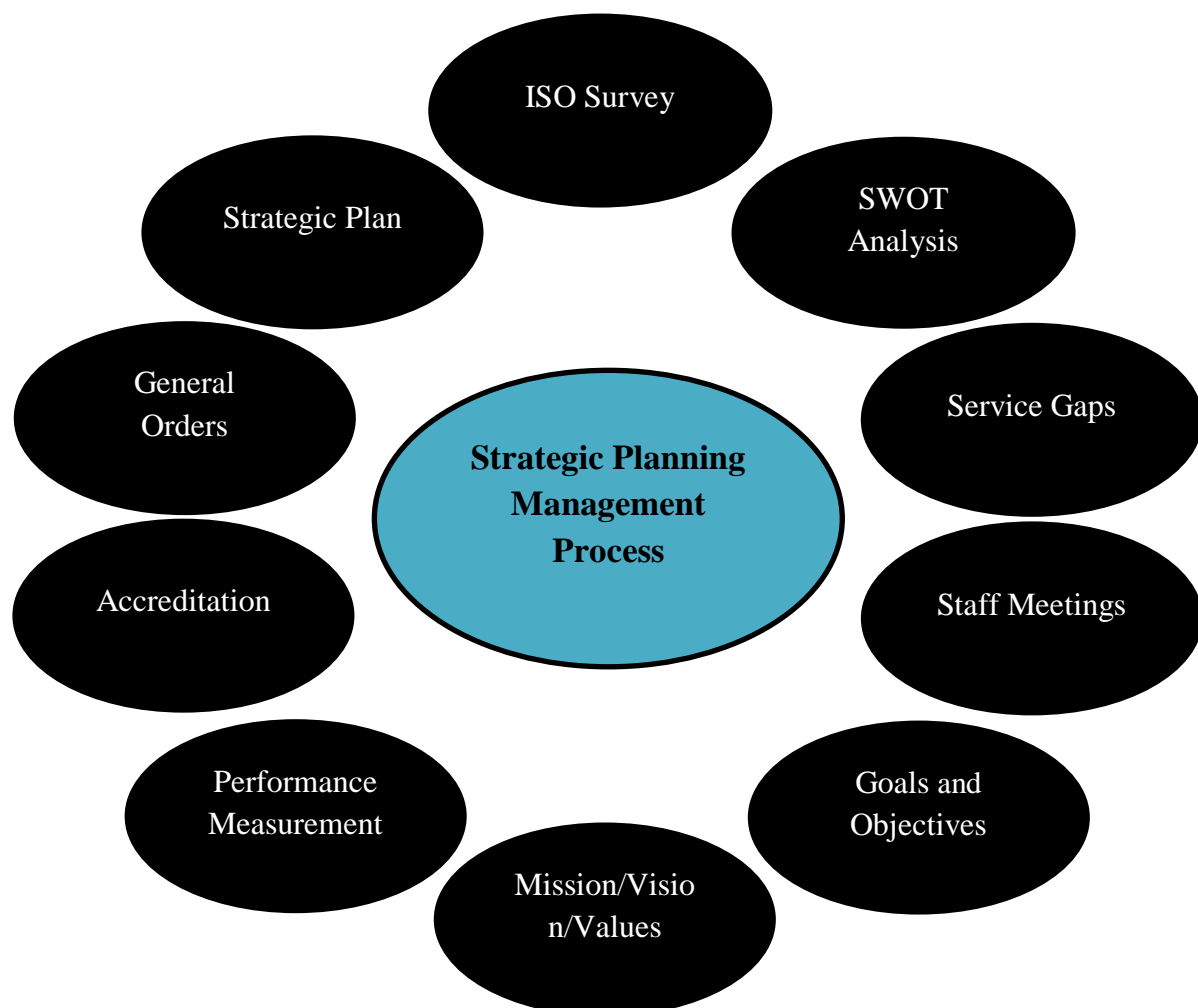


This methodology ensures that HPFD will have a standard process to measure performance, develop strategies, make changes or adjustments and communicate these items to the department as well as internal and external stakeholders.



Conclusions

Succession planning and the continued use of the strategic planning management process will allow HPFD to continue to grow and monitor forward progress, and proceed with the concept of a continual self-assessment process. The strategic planning management process enables HPFD to cover many topics and discussions that foster positive growth. The graphic below indicates all of the aspects of the strategic planning management process, which are all interconnected. HPFD has adopted the accreditation process, and is committed to continual growth through communication and performance measurement to enable proper response, public education, fire investigation and emergency management in the CoHP. The inclusion of both internal and external stakeholders allows for an open dialogue between HPFD and interested and invested parties, which foster communication and development of the department.





List of Acronyms

Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF)
Center for Public Safety Excellence (CPSE)
City Coordination Center (CCC)
City of High Point (CoHP)
City of High Point Emergency Operations Plan (EOP)
City of High Point Fire Department (HPFD)
City of High Point Learning Management System (LMS)
Commission on Fire Accreditation International (CFAI)
Computer Aided Dispatch (CAD)
Fire Demand Zone (FDZ)
Firehouse Record Management System (RMS)
Effective Response Force (ERF)
Emergency Medical Services (EMS)
Emergency Medical Technician (EMT)
Emergency Vehicle Technician (EVT)
Generally Accepted Accounting Principles (GAAP)
Geographic Information System (GIS)
Government Finance Officers Association (GFOA)
Guilford Technical Community College Emergency Responders Training Center (GTCC ERTC).
Insurance Services Office (ISO)
Mobile Computer Terminal (MCT)
National Fire Incident Reporting System (NFIRS)
Office of Emergency Management (OEM)
Piedmont Triad International Airport (PTIA)
Public Protection Classification (PPC)
Special Operation Groups (SOG)
Special Training Groups (STG)
Standard of Cover document (SOC)
State Bureau of Investigations (SBI)
Strengths, Weaknesses, Opportunities and Potential Threats (SWOT)
University of North Carolina (UNC)



Appendix A (charts)

HPFD Apparatus/Equipment List

	<u>Company</u>	<u>Unit No.</u>	<u>Year</u>	<u>Make</u>	<u>Pump</u>	<u>Tank</u>	<u>Aerial</u>
<u>Station 1</u>	Engine 1	80-77	2014	Pierce	1500	500	
	Res. Eng 1	80-06	1998	ALF	1500	500	
	Hazmat 1	80-27	2006	Freightliner			
	Battalion 2	80-73	2011	Chevy Tahoe			
<u>Station 2</u>	Eng. 2	80-10	2008	Pierce	1500	500	
	Ladder 2	80-23	2004	Pierce	1500	200 W	100' Tiller
	Fire Safety Tk.	80-14	2003	Ford			
	Fire Safety Trailer	80-56	2003	Scotty			
	Res. Sq 2	80-28	1996	International			
	Air 1	80-48	2015	Freightliner			
	Brush Truck	80-28	2011	International			
	Gator		2005	John Deer			
	Battalion Res.	80-62	2004	Chevy			
	Parade Truck		1928	Am. LaFrance			
<u>Station 3</u>	Engine 3	80-07	1998	ALF	1500	500	
	Res Eng. 3		1992	Seagrave	1750	750	
	Decon Truck	80-76	2006	Ford			
	Decon Trailer	80-26	2003	Exis			
	VIP Truck	80-31	1991	Chevy			
	Mobile Command		1998	Freightliner			
<u>Station 4</u>	Engine 4	80-30	2008	Pierce	1500	500	
	Ladder 4	80-45	1999	KME	1500	250	100' Platform
	Tech Res 4	80-02	1997	Freightliner			
	Tech Trailer	80-36	1989	Centennial			
<u>Station 5</u>	Engine 5	80-54	2003	KME	1500	1000	
	Truck 5	80-29	1973	Ford			
	Pontoon Boat	80-37	2006	Clark			
<u>Station 6</u>	Engine 6	80-08	1998	ALF	1500	500	
	Tech Res 6	80-75	2006	Ford			
	Trench Trailer	80-17	1998	Pace			
<u>Station 7</u>	Engine 7	80-39	2009	Pierce	1500	500	
	Ladder 7	80-44	1995	LTI	1500	400	75' Ladder



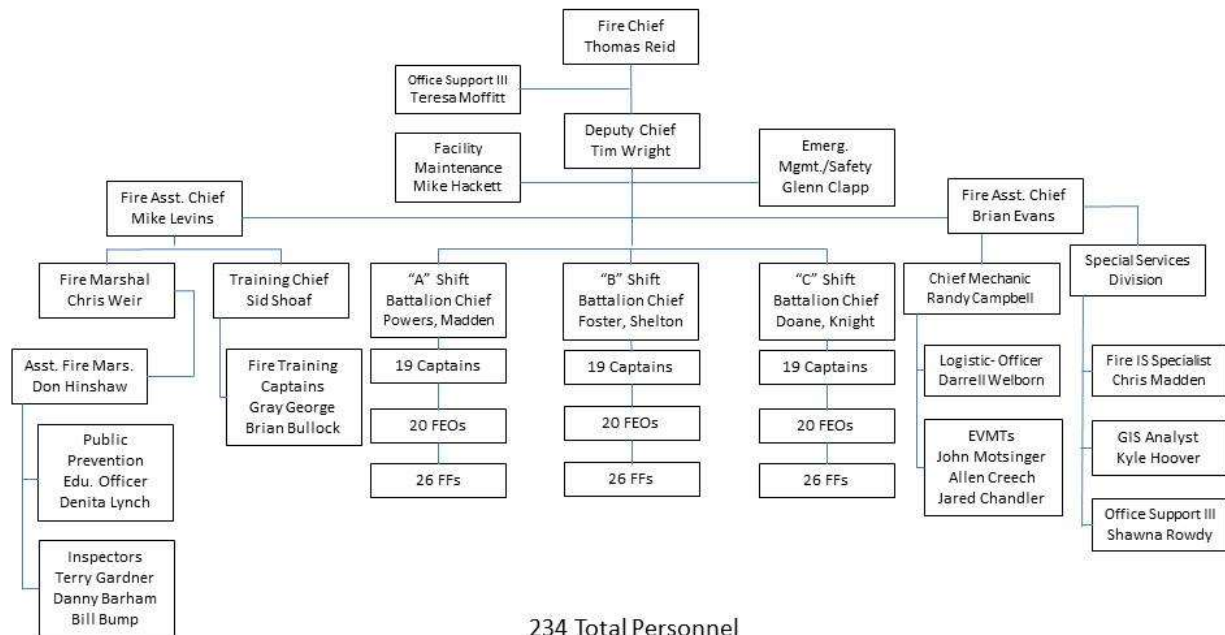
High Point Fire Department- Standard of Cover 2016

<u>Station 8</u>	Engine 8	80-09	1998	ALF	1500	500	
	Res Eng. 8	80-59	1992	Seagrave	1750	750	
<u>Station 9</u>	Engine 9	80-78	2014	Pierce	1500	500	
	Pink Cares Engine		1979	ALF			
<u>Station 10</u>	Engine 10	80-38	2009	Pierce	1500	500	
	Truck 10	80-65	2003	Ford			
	Boat 10	80-24		Rescue 1			
<u>Station 11</u>	Engine 11	80-42	2012	Pierce	1500	750	
	Res. Eng 11	80-12	1988	Pierce	1000	500	
Station 12	Eng. 12	80-05	1998	ALF	1500	500	105' Ladder
	Ladder 12	80-41	2012	Pierce	1500	400	
	Tanker 12	80-58	1991	Grumman	1000	1000	
Station 13	Eng. 13	80-04	1998	ALF	1500	500	
	Rescue 1	80-35	2007	Freightliner			
	Battalion 1	80-72	2011	Chevy Tahoe			
Station 26	Engine 26	80-55	2003	KME	1500	1000	75' Ladder
	Res. Ladder 26	80-40	1995	LTI	1500	400	



HPFD Organizational Chart

High Point Fire Department 2016



234 Total Personnel

210 Operations/Suppression Division

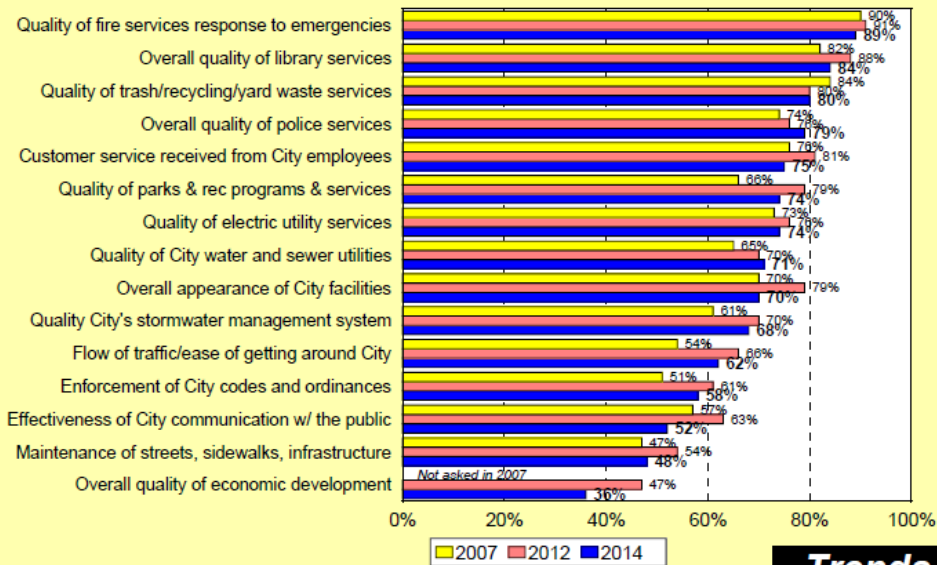
24 Administration/Inspections/Fleet/Support



CoHP Customer Satisfaction Survey Results

Q1. Overall Satisfaction With City Services by Major Category - 2007, 2012 and 2014

by percentage of respondents who rated the item as a 4 or 5 on a 5-point scale (excluding don't knows)

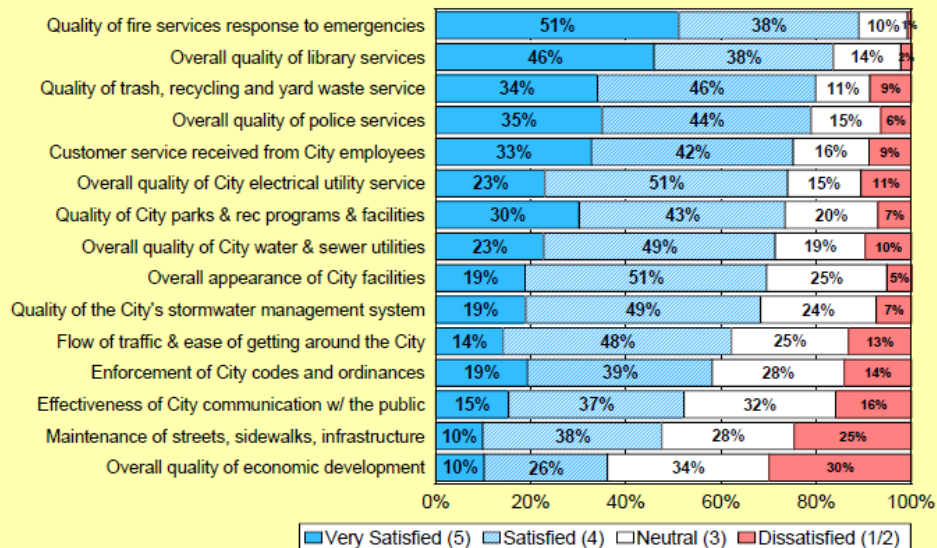


Source: ETC Institute DirectionFinder (2014 - High Point, NC)

Trends

Q1. Overall Satisfaction With City Services by Major Category

by percentage of respondents who rated the item as a 1 to 5 on a 5-point scale (excluding don't knows)



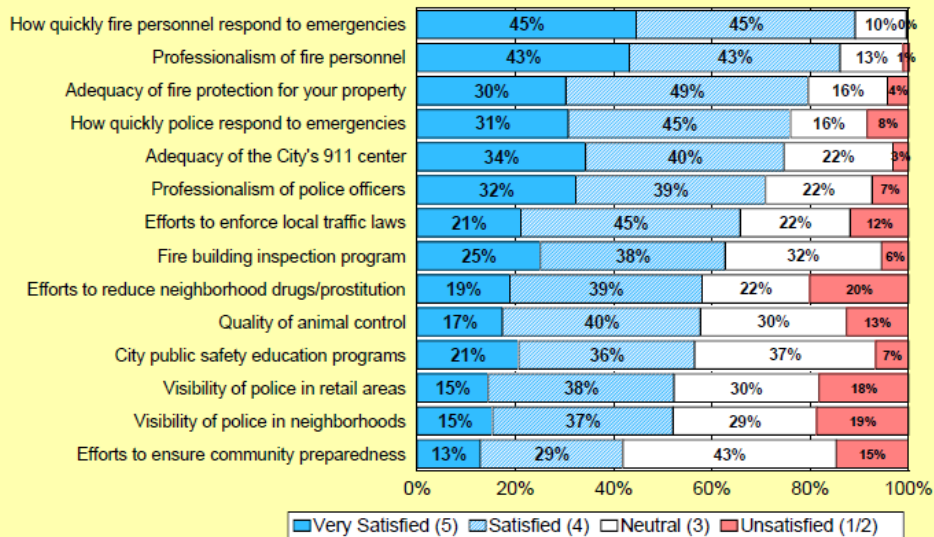
Source: ETC Institute DirectionFinder (2014 - High Point, NC)



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Q4. Satisfaction with Public Safety and Emergency Services

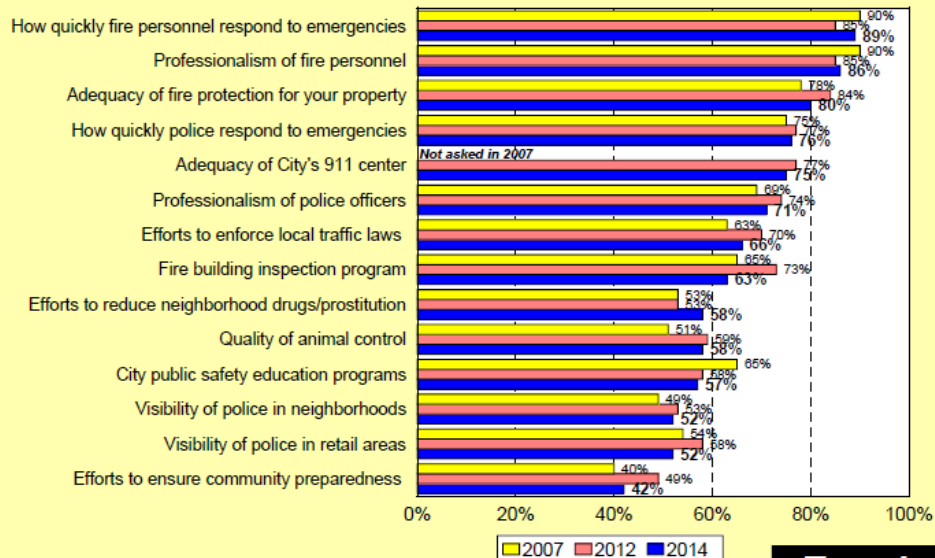
by percentage of respondents who rated the item as a 1 to 5 on a 5-point scale (excluding don't knows)



Source: ETC Institute DirectionFinder (2014 - High Point, NC)

Q4. Satisfaction with Public Safety and Emergency Services - 2007, 2012 and 2014

by percentage of respondents who rated the item as a 4 or 5 on a 5-point scale (excluding don't knows)

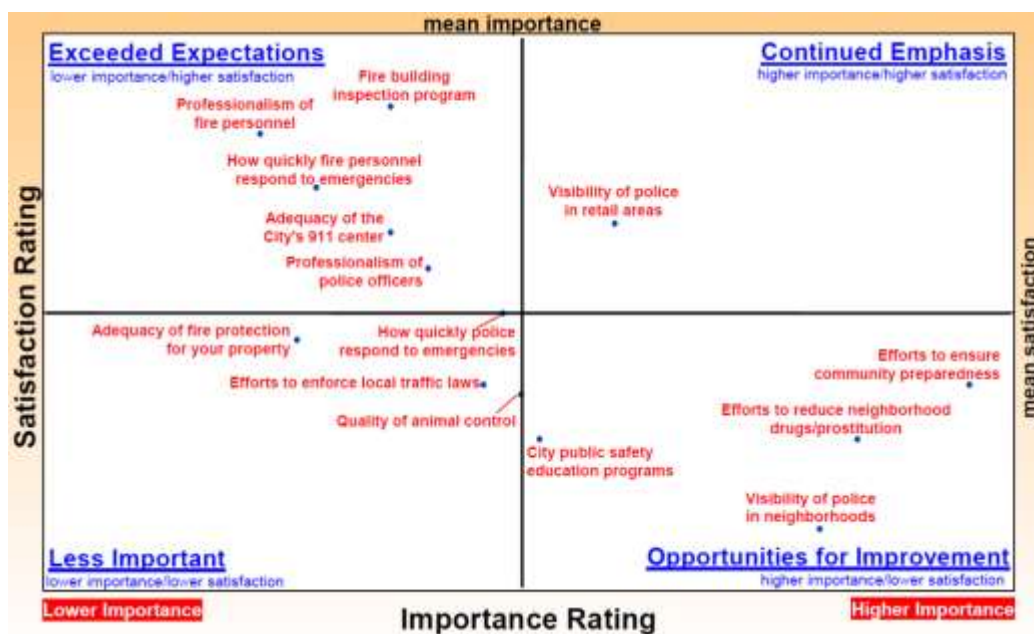
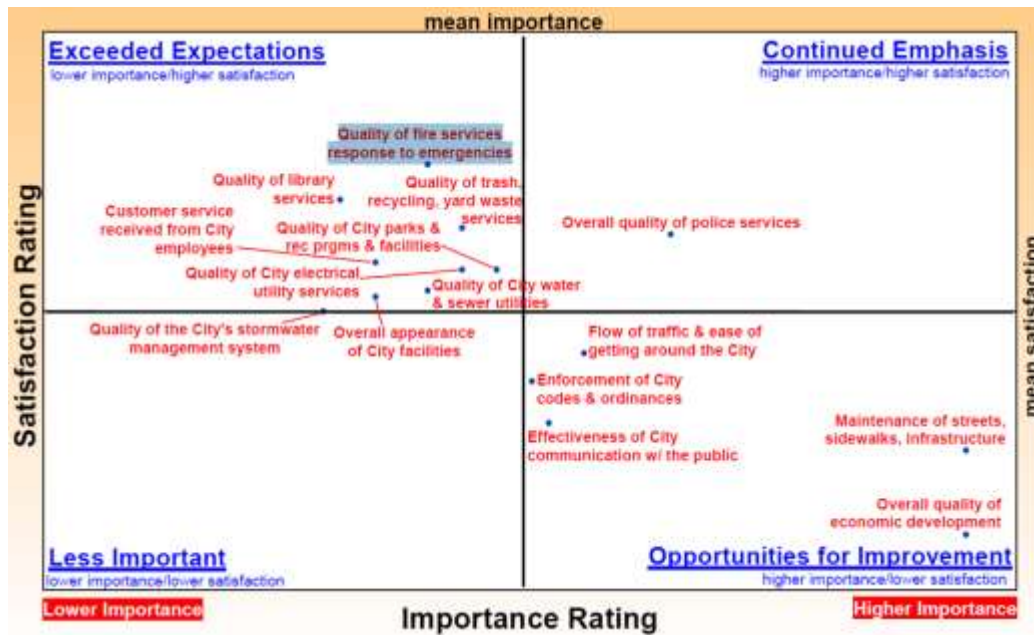


Source: ETC Institute DirectionFinder (2014 - High Point, NC)

Trends



High Point Fire Department- Standard of Cover 2016





Frequency of Incident Types

(1/1/2013-12/31/2015) Source: HPFD RMS Data (FireInfo and Firehouse)

NFIRS	Description	2013	2014	2015
100	Fire, other	19	9	8
111	Building Fire	116	119	134
112	Fires in structure other than in a building	2	2	13
113	Cooking fire, confined to container	53	48	70
114	Chimney or flue fire, confined to the chimney or flue	11	7	6
115	Incinerator overload			1
116	Fuel burner/boiler malfunction, fire confined	2	1	7
117	Commercial Compactor fire, confined to rubbish	3	2	
118	Trash or rubbish fire, contained	36	30	7
121	Fire in mobile home used as fixed residence	1		
123	Fire in portable building, fixed location	1	1	
130	Mobile property (vehicle) fire, Other	11	6	6
131	Passenger vehicle fire	50	52	54
132	Road freight or transport vehicle fire	1	3	5
134	Water vehicle fire		1	
135	Aircraft fire		1	
137	Camper or recreational vehicle			1
138	Off-road vehicle or heavy equipment fire	1	2	3
140	Natural vegetation fire, Other	24	36	43
141	Forest, woods or wildland fire	7	10	7
142	Brush or brush-and-grass mixture fire	29	37	45
143	Grass fire	19	34	21
150	Outside rubbish fire, Other	11	15	28
151	Outside rubbish, trash or waste fire	17	31	52
152	Garbage dump			1
153	Construction or demolition landfill fire			1
154	Dumpster or other outside trash receptacle fire	12	7	20
155	Outside stationary compactor/compacted trash fire	1	1	1
160	Special outside fire, Other	6	13	12
161	Outside storage fire		3	
162	Outside equipment fire	6	8	6
163	Outside gas or vapor combustion explosion		3	
211	Overpressure rupture of steam pipe or pipeline		1	
243	Fireworks explosion (no fire)		1	
251	Excessive heat, scorch burns with no ignition	12	20	30
300	Rescue, emergency medical call (EMS) Incident	17	8	
311	Medical assist, assist EMS crew	2369	1166	639
320	Emergency medical service (EMS) incident	31	30	
321	EMS call, excluding vehicle accident with injury	5195	2826	5633
3211	EMS call, on scene with no patient contact		649	163
3212	EMS call, ALS assist given to EMS on scene		2940	1339



High Point Fire Department- Standard of Cover 2016

322	Motor vehicle accident with injuries	568	289	459
3221	MVA-NO PATIENT Contact		25	5
3222	MVA-Assisted with Patient	40	220	78
323	Motor vehicle/pedestrian accident (MV Ped)	40	27	31
3231	MVA/PED-NO PATIENT Contact	279	3	1
3232	MVA/PED-Assisted with Patient	279	23	9
324	Motor Vehicle Accident with no injuries	279	280	382
331	Lock-in (if lock out , use 511)	19	20	23
341	Search for person on land	2		6
342	Search for person in water		1	1
350	Extrication, rescue, Other	1	2	2
352	Extrication of victim(s) from vehicle	2	6	37
353	Removal of victim(s) from stalled elevator	30	18	29
354	Trench/below-grade rescue			1
355	Confined space rescue			1
360	Water and ice-related rescue, other	3	5	1
363	Swift Water Rescue			1
365	Watercraft rescue	1	4	1
371	Electrocution or potential electrocution	1	2	
381	Rescue or EMS standby	1	9	38
400	Hazardous condition, Other	3	18	
410	Combustible/flammable gas/liquid condition, other		6	9
411	Gasoline or other flammable liquid spill	2	15	27
412	Gas leak (natural gas or LPG)	75	87	74
413	Oil or other combustible liquid spill	8	9	7
420	Toxic condition, Other		2	3
421	Chemical hazard (no spill or leak)	1	1	3
422	Chemical spill or leak	4	3	10
423	Refrigeration leak	2	1	1
424	Carbon monoxide incident	42	42	39
440	Electrical wiring/equipment problem, Other	39	76	61
441	Heat from short circuit (wiring), defective/worn	17	17	23
442	Overheated motor	7	22	17
443	Breakdown of light ballast	3	1	5
444	Power Line	17	110	34
445	Arcing, shorted electrical equipment	35	73	38
451	Biological hazard			1
460	Accident, potential accident, Other	2	5	5
461	Building or structure weakened or collapsed	3	2	8
462	Aircraft standby	7	4	9
463	Vehicle accident, general cleanup	22	32	62
471	Explosive, bomb removal (for bomb scare, use 721)	1		
480	Attempted burning, illegal action, other	10	12	7
481	Attempt to Burn	1		1
500	Service call, other	144	154	



High Point Fire Department- Standard of Cover 2016

510	Person in distress, other	8	16	41
511	Lock Out	47	45	62
512	Ring or Jewelry Removal		2	1
520	Water Problem, other	30	72	84
521	Water evacuation			8
522	Water or steam leak	20	68	152
531	Smoke or Odor Removal	37	46	61
540	Animal Problem, other	1	3	1
541	Animal Problem	2		1
542	Animal Rescue	3	7	11
550	Public service assistance, Other	20	55	80
551	Assist police or other governmental agency	40	46	28
552	Police matter	4	4	8
553	Public service	29	39	67
555	Defective elevator, no occupants	6	3	2
561	Unauthorized burning	30	22	
571	Cover assignment, standby, move up	1		2
600	Good intent call, Other	178	89	
611	Dispatched and cancelled en route	307	284	308
6111	No Activity	5	12	28
621	Wrong location	5	6	9
622	No Incident found on arrival at dispatch address	63	112	137
631	Authorized controlled burning	3	17	12
632	Prescribed fire	5	1	2
650	Steam, Other gas mistaken for smoke, Other	5	6	8
651	Smoke scare, odor of smoke	96	90	75
652	Steam, vapor, fog or dust thought to be smoke	10	5	20
653	Smoke from barbecue, tar kettle	1	11	6
661	EMS call, party transported by non-fire agency	2	13	10
671	HazMat release investigation w/no HazMat	7	23	24
700	False alarm or false call, Other	70	50	
710	Malicious, mischievous false call, Other	24	40	24
711	Municipal alarm system, malicious false alarm	12	14	7
712	Direct tie to FD, malicious false alarm	1		
713	Telephone, malicious false alarm	2		3
714	Central station, malicious false alarm	8	6	1
715	Local alarm system, malicious false alarm	3	2	1
721	Bomb scare - no bomb	3	11	4
730	System malfunction, Other	38	71	55
731	Sprinkler activation due to malfunction	11	28	31
732	Extinguishing system activation due to malfunction	7	3	3
733	Smoke detector activation due to malfunction	140	131	148
734	Heat detector activation due to malfunction	9	2	3
735	Alarm system sounded due to malfunction	96	101	86
736	CO detector activation due to malfunction	31	24	37



High Point Fire Department- Standard of Cover 2016

740	Unintentional transmission of alarm, Other	89	107	119
741	Sprinkler activation, no fire - unintentional	21	59	37
742	Extinguishing system activation	5	7	
743	Smoke detector activation, no fire - unintentional	429	504	609
744	Detector activation, no fire - unintentional	94	119	105
745	Alarm system activation, no fire - unintentional	207	241	253
746	Carbon monoxide detector activation, no CO	27	28	27
812	Flood assessment			1
813	Wind storm, tornado/hurricane assessment	1	3	8
814	Lightning strike (no fire)	1	2	5
815	Severe weather or natural disaster standby	6	1	
911	Citizen complaint	3	10	12
	Total	12,373	12,424	12,746
	Year	2013	2014	2015



Percentage of Incident Types

(1/1/2013-12/31/2015)

NFIRS	Description	Total	Percent
100	Fire, other	36	0.1%
111	Building Fire	369	1.0%
112	Fires in structure other than in a building	17	0.0%
113	Cooking fire, confined to container	171	0.5%
114	Chimney or flue fire, confined to the chimney or flue	24	0.1%
115	Incinerator overload	1	0.0%
116	Fuel burner/boiler malfunction, fire confined	10	0.0%
117	Commercial Compactor fire, confined to rubbish	5	0.0%
118	Trash or rubbish fire, contained	73	0.2%
121	Fire in mobile home used as fixed residence	1	0.0%
122	Fire in motor home, camper, recreational vehicle	0	0.0%
123	Fire in portable building, fixed location	2	0.0%
130	Mobile property (vehicle) fire, Other	23	0.1%
131	Passenger vehicle fire	156	0.4%
132	Road freight or transport vehicle fire	9	0.0%
134	Water vehicle fire	1	0.0%
135	Aircraft fire	1	0.0%
137	Camper or recreational vehicle	1	0.0%
138	Off-road vehicle or heavy equipment fire	6	0.0%
140	Natural vegetation fire, Other	103	0.3%
141	Forest, woods or wildland fire	24	0.1%
142	Brush or brush-and-grass mixture fire	111	0.3%
143	Grass fire	74	0.2%
150	Outside rubbish fire, Other	54	0.1%
151	Outside rubbish, trash or waste fire	100	0.3%
152	Garbage dump	1	0.0%
153	Construction or demolition landfill fire	1	0.0%
154	Dumpster or other outside trash receptacle fire	39	0.1%
155	Outside stationary compactor/compacted trash fire	3	0.0%
160	Special outside fire, Other	31	0.1%
161	Outside storage fire	3	0.0%
162	Outside equipment fire	20	0.1%
163	Outside gas or vapor combustion explosion	3	0.0%
211	Overpressure rupture of steam pipe or pipeline	1	0.0%
243	Fireworks explosion (no fire)	1	0.0%
251	Excessive heat, scorch burns with no ignition	62	0.2%
300	Rescue, emergency medical call (EMS) Incident	25	0.1%
311	Medical assist, assist EMS crew	4174	11.1%
320	Emergency medical service (EMS) incident	61	0.2%
321	EMS call, excluding vehicle accident with injury	13654	36.4%
3211	EMS call, on scene with no patient contact	812	2.2%
3212	EMS call, ALS assist given to EMS on scene	4279	11.4%
322	Motor vehicle accident with injuries	1316	3.5%
3221	MVA-NO PATIENT Contact	30	0.1%



High Point Fire Department- Standard of Cover 2016

3222	MVA-Assisted with Patient	338	0.9%
323	Motor vehicle/pedestrian accident (MV Ped)	98	0.3%
3231	MVA/PED-NO PATIENT Contact	283	0.8%
3232	MVA/PED-Assisted with Patient	311	0.8%
324	Motor Vehicle Accident with no injuries	941	2.5%
331	Lock-in (if lock out , use 511)	62	0.2%
341	Search for person on land	8	0.0%
342	Search for person in water	2	0.0%
350	Extrication, rescue, Other	5	0.0%
352	Extrication of victim(s) from vehicle	45	0.1%
353	Removal of victim(s) from stalled elevator	77	0.2%
354	Trench/below-grade rescue	1	0.0%
355	Confined space rescue	1	0.0%
360	Water and ice-related rescue, other	9	0.0%
363	Swift Water Rescue	1	0.0%
365	Watercraft rescue	6	0.0%
371	Electrocution or potential electrocution	3	0.0%
381	Rescue or EMS standby	48	0.1%
400	Hazardous condition, Other	21	0.1%
410	Combustible/flammable gas/liquid condition, other	15	0.0%
411	Gasoline or other flammable liquid spill	44	0.1%
412	Gas leak (natural gas or LPG)	236	0.6%
413	Oil or other combustible liquid spill	24	0.1%
420	Toxic condition, Other	5	0.0%
421	Chemical hazard (no spill or leak)	5	0.0%
422	Chemical spill or leak	17	0.0%
423	Refrigeration leak	4	0.0%
424	Carbon monoxide incident	123	0.3%
440	Electrical wiring/equipment problem, Other	176	0.5%
441	Heat from short circuit (wiring), defective/worn	57	0.2%
442	Overheated motor	46	0.1%
443	Breakdown of light ballast	9	0.0%
444	Power Line	161	0.4%
445	Arcing, shorted electrical equipment	146	0.4%
451	Biological hazard	1	0.0%
460	Accident, potential accident, Other	12	0.0%
461	Building or structure weakened or collapsed	13	0.0%
462	Aircraft standby	20	0.1%
463	Vehicle accident, general cleanup	116	0.3%
471	Explosive, bomb removal (for bomb scare, use 721)	1	0.0%
480	Attempted burning, illegal action, other	29	0.1%
481	Attempt to Burn	2	0.0%
500	Service call, other	298	0.8%
510	Person in distress, other	65	0.2%
511	Lock Out	154	0.4%
512	Ring or Jewelry Removal	3	0.0%
520	Water Problem,other	186	0.5%
521	Water evacuation	8	0.0%



High Point Fire Department- Standard of Cover 2016

522	Water or steam leak	240	0.6%
531	Smoke or Odor Removal	144	0.4%
540	Animal Problem,other	5	0.0%
541	Animal Problem	3	0.0%
542	Animal Rescue	21	0.1%
5501	Smoke or CO detector Battery check or change	0	0.0%
550	Public service assistance, Other	155	0.4%
551	Assist police or other governmental agency	114	0.3%
552	Police matter	16	0.0%
553	Public service	135	0.4%
555	Defective elevator, no occupants	11	0.0%
561	Unauthorized burning	52	0.1%
571	Cover assignment, standby, moveup	3	0.0%
600	Good intent call, Other	267	0.7%
611	Dispatched and cancelled en route	899	2.4%
6111	No Activity	45	0.1%
621	Wrong location	20	0.1%
622	No Incident found on arrival at dispatch address	312	0.8%
631	Authorized controlled burning	32	0.1%
632	Prescribed fire	8	0.0%
650	Steam, Other gas mistaken for smoke, Other	19	0.1%
651	Smoke scare, odor of smoke	261	0.7%
652	Steam, vapor, fog or dust thought to be smoke	35	0.1%
653	Smoke from barbecue, tar kettle	18	0.0%
661	EMS call, party transported by non-fire agency	25	0.1%
671	HazMat release investigation w/no HazMat	54	0.1%
700	False alarm or false call, Other	120	0.3%
710	Malicious, mischievous false call, Other	88	0.2%
711	Municipal alarm system, malicious false alarm	33	0.1%
712	Direct tie to FD, malicious false alarm	1	0.0%
713	Telephone, malicious false alarm	5	0.0%
714	Central station, malicious false alarm	15	0.0%
715	Local alarm system, malicious false alarm	6	0.0%
721	Bomb scare - no bomb	18	0.0%
730	System malfunction, Other	164	0.4%
731	Sprinkler activation due to malfunction	70	0.2%
732	Extinguishing system activation due to malfunction	13	0.0%
733	Smoke detector activation due to malfunction	419	1.1%
734	Heat detector activation due to malfunction	14	0.0%
735	Alarm system sounded due to malfunction	283	0.8%
736	CO detector activation due to malfunction	92	0.2%
740	Unintentional transmission of alarm, Other	315	0.8%
741	Sprinkler activation, no fire - unintentional	117	0.3%
742	Extinguishing system activation	12	0.0%
743	Smoke detector activation, no fire - unintentional	1542	4.1%
744	Detector activation, no fire - unintentional	318	0.8%
745	Alarm system activation, no fire - unintentional	701	1.9%
746	Carbon monoxide detector activation, no CO	82	0.2%



High Point Fire Department- Standard of Cover 2016

800	Severe weather or natural disaster, Other	0	0.0%
812	Flood assessment	1	0.0%
813	Wind storm, tornado/hurricane assessment	12	0.0%
814	Lightning strike (no fire)	8	0.0%
815	Severe weather or natural disaster standby	7	0.0%
911	Citizen complaint	25	0.1%
	Total	37,543	
	Year	2013-15	



External Stakeholder Survey Results

HPFD Services used	
Emergency	33.33%
Non-Emergency	33.33%
None	33.33%

HPFD staff professional	
Extremely	88.89%
Very	11.11%
Moderately	
Slightly	
Not at all	
N/A	

HPFD knowledgeable staff	
Extremely	88.89%
Very	11.11%
Moderately	
Slightly	
Not at all	
N/A	

HPFD Helpful Staff	
Extremely	88.89%
Very	11.11%
Moderately	
Slightly	
Not at all	
N/A	

Quick HPFD response	
Extremely	88.89%
Very	
Moderately	
Slightly	
Not at all	
N/A	11.11%

Appealing HPFD service	
Extremely	77.78%
Very	11.11%
Moderately	
Slightly	
Not at all	
N/A	11.11%



High Point Fire Department- Standard of Cover 2016

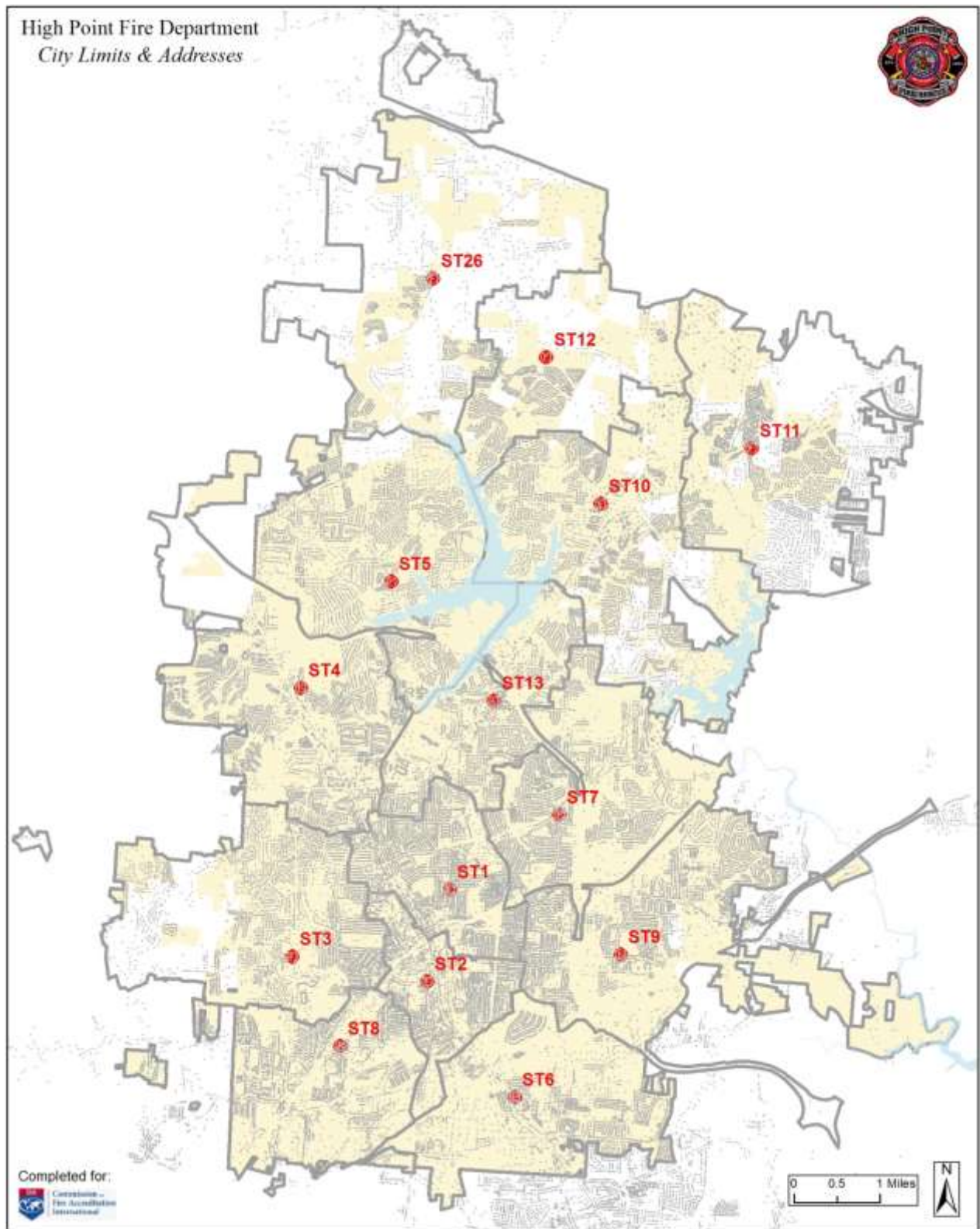
Fire Demand Zone Call Volume

(1/1/2013-12/31/2015) Source: CAD Data

FDZ	Total	Fire	Alarm	Med	Hazmat	Rescue
CLFX	372	14	61	222	1	3
DEEP	290	4	13	211	10	4
F2LM	697	16	296	322	9	24
F2LE	2981	85	790	1972	10	28
FCTI	1	0	0	1	0	0
FCXI	244	15	62	133	2	0
2LCX	472	13	127	303	0	21
FDCI	79	2	14	53	1	1
FDCL	2	2	0	0	0	0
FDCO	19	5	4	7	0	1
FHTI	560	24	31	432	6	2
FHPI	0	0	0	0	0	0
FHT2	6	1	1	1	0	0
FHW3	36	0	0	26	2	2
FHWD	2	0	0	1	0	0
FHWF	0	0	0	0	0	0
FHWG	34	0	0	26	0	0
FHWH	22	0	0	14	0	1
FHWP	1	0	0	0	0	0
FHWR	8	0	0	6	0	0
FHWY	327	2	0	216	20	22
FRNO	28079	1373	2476	20258	386	237
GSOT	7	1	1	2	0	0
HPFT	3	0	1	2	0	0
PS22	75	3	29	25	3	1
PS46	445	19	54	323	5	2
PSFD	94	13	20	28	5	0
TANK	259	12	33	161	4	4
FMED	3508	150	255	2760	44	6
F2L2	11	0	7	4	0	0
F2L2	11	0	7	4	0	0
F2L4	19	1	5	11	0	0
F2LE	2981	85	790	1972	10	28
HTMI	178	13	8	128	3	0

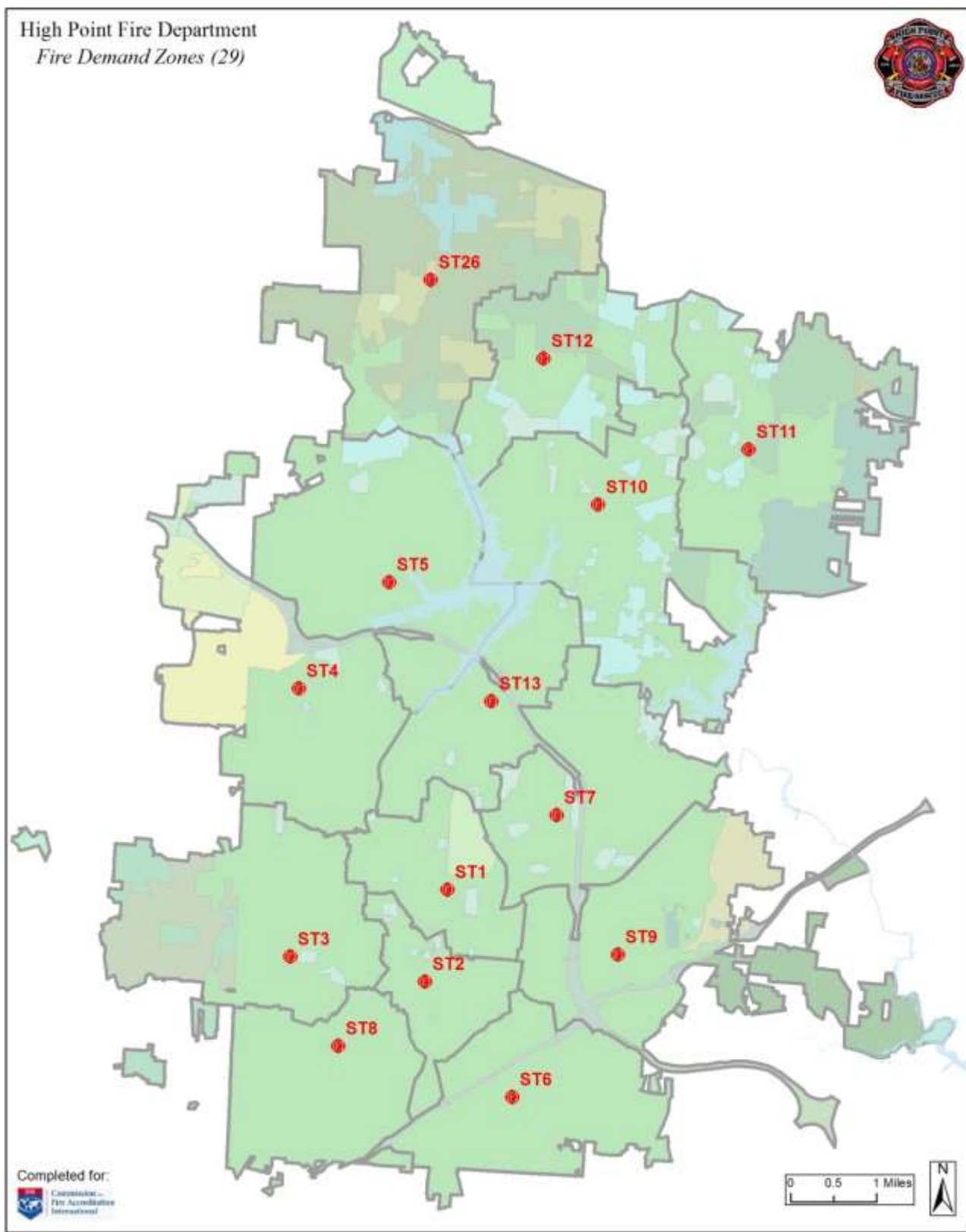


Appendix B (maps)



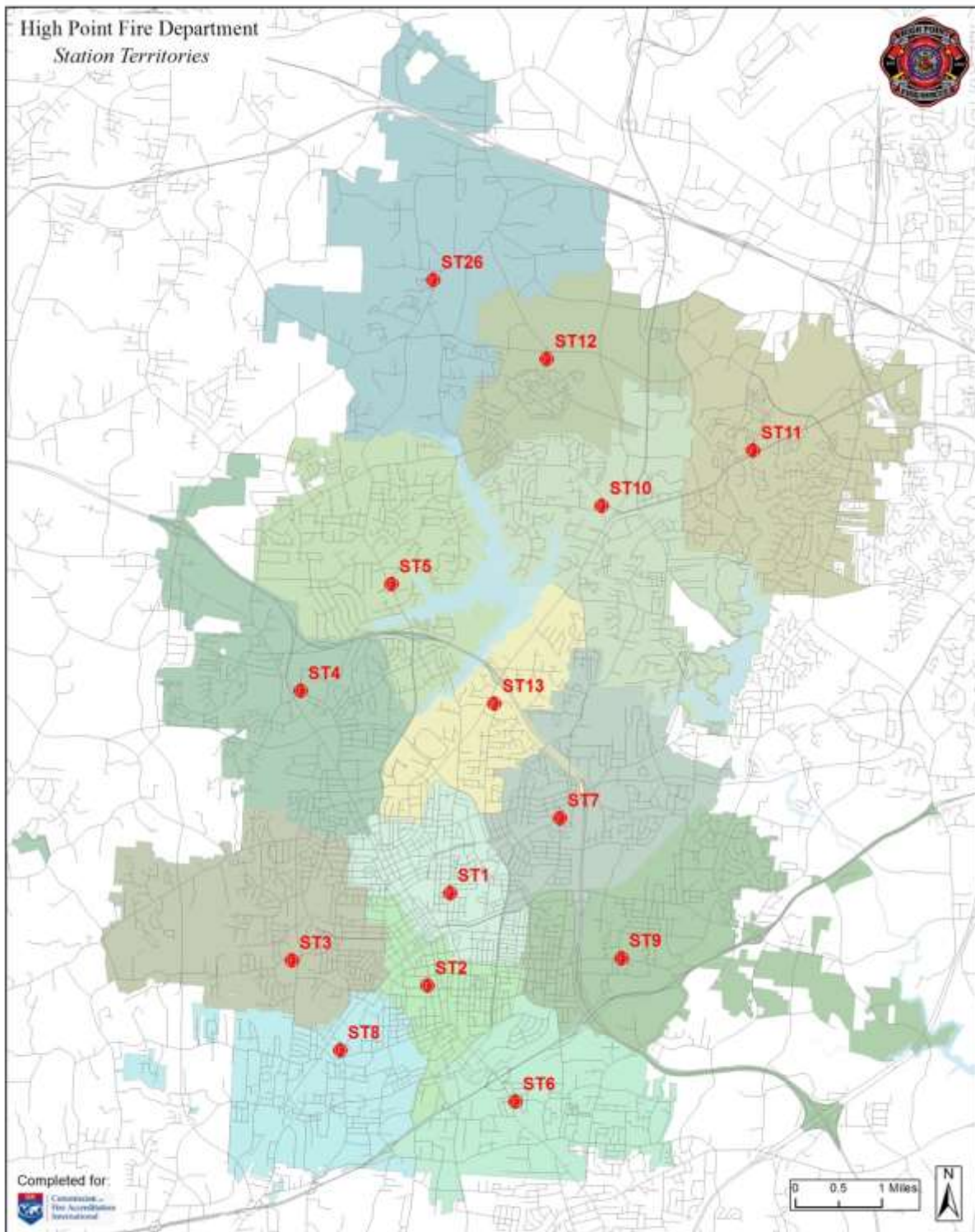


High Point Fire Department- Standard of Cover 2016





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